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MASTER PLAN

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" Sacramento area
Traffic Bicycles " "*





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SACRAMENTO BIKEWAYS

MASTER PLAN

by

Sacramento City-County
Bikeway Task Force



JANUARY 1975

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ACKNOWLEDGEMENTS

The Sacramento City-County Bikeway Task Force is indebted to the many public agencies and individuals who assisted in the preparation of this Master Plan. In particular we would like to mention the following:

The Advanced Planning and Drafting Sections of the County Planning Department, the Planning and Development Division of the County Parks and Recreation Department, Public Works Department - Highways and Bridges Division, Cal Trans and the California State Parks and Recreation Department.

And finally, we wish to express our appreciation to Ellen Rodrigues, a former member of the Bikeways Task Force now residing in the San Francisco Bay Area, for her dedication and contribution to this Master Plan.

SACRAMENTO CITY-COUNTY BIKEWAY TASK FORCE

827 SEVENTH STREET

SACRAMENTO, CALIFORNIA 95814

JANUARY, 1975

Board of Supervisors
Sacramento County
Sacramento, California

Honorable Board Members:

The bicycle, long considered in this country as a recreational vehicle for children, has in recent years been the recipient of a tremendous surge in popularity. It has been estimated that during 1974 about sixteen million new bicycles were sold in the United States, almost double the sales of new automobiles. Today, there are an estimated 80 million bicycles in the United States and projections indicate that by 1980 there will be nearly 115 million.

In Sacramento City and County, we estimate that there are more than one-quarter of a million bicycles today.

Clearly the bicycle can no longer be considered a children's toy or a temporary fad for adults.

This great increase in bicycle ownership and use has created a large demand for bicycle facilities which in turn is generating a growing response from the various levels of government. The City and the County of Sacramento certainly have been among those responsible governments that have taken a positive leadership in addressing the issue of bicycle planning and development. This proposed Bicycle Master Plan serves testimony to that.

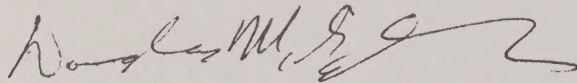
The Sacramento City-County Bikeway Task Force takes pride in forwarding to your honorable Board this Master Plan. This plan is a by-product of the many efforts of many dedicated citizens, in and out of government circles.

In the preparation of the plan we attempted to be comprehensive and fair, always guided by what in our opinion we consider to be in the best interests of the citizens of Sacramento.

We believe that the proposed Bikeway Master Plan constitutes a major step in accepting and promoting bicycling as a logical and highly desirable mode of recreation and transportation. But, the work is by no means completed. Programs for bicycle safety education, law enforcement, and a full commitment to an on-going bikeway development program are a must if the job is to be completed.

We wish to express our appreciation to the Sacramento County Board of Supervisors for having given us the opportunity to serve the County of Sacramento.

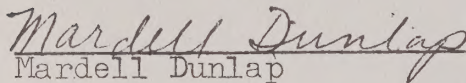
Sincerely,



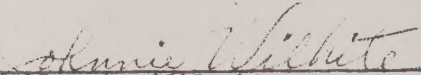
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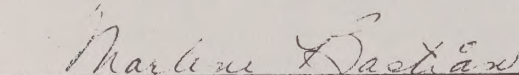
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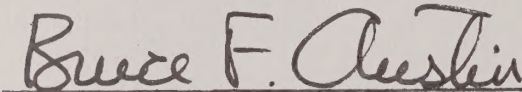
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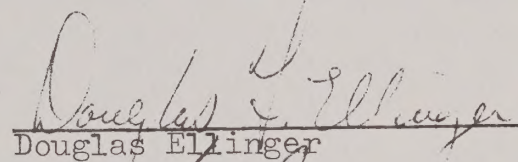
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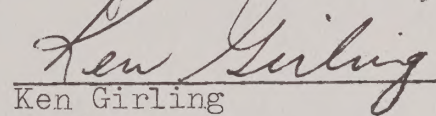
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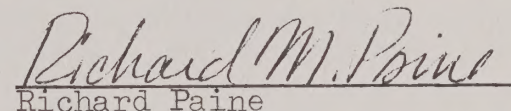
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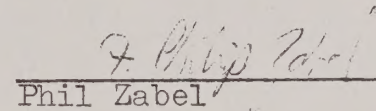
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Phil Zabel

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Chapter 1

INTRODUCTION

Sacramento, along with the rest of the nation, is experiencing an increasing interest in bicycling. Reasons for the popularity of the bicycle include practical and social advantages in that it serves both utilitarian and recreational needs of the community.

During the registration period of 1971-1973, there were 31,882 bicycles registered with the Sheriff's Office. The City of Sacramento reports 32,000 bikes legally registered for that period of time. Studies in other parts of the country have shown that only 30% of the total bicycle population are registered with the proper authorities. If this proportion can be extrapolated for the entire county, and recognition is given to the steady increase in bicycle ownership, it can be estimated that today there are more than one-quarter of a million bicycles in the City and County of Sacramento.

This Master Plan is an effort to coordinate and develop a bikeway system to safely meet the increasing bicycling transportation and recreation needs of the citizens of Sacramento City and County. The reasons for a bikeway master plan include the following:

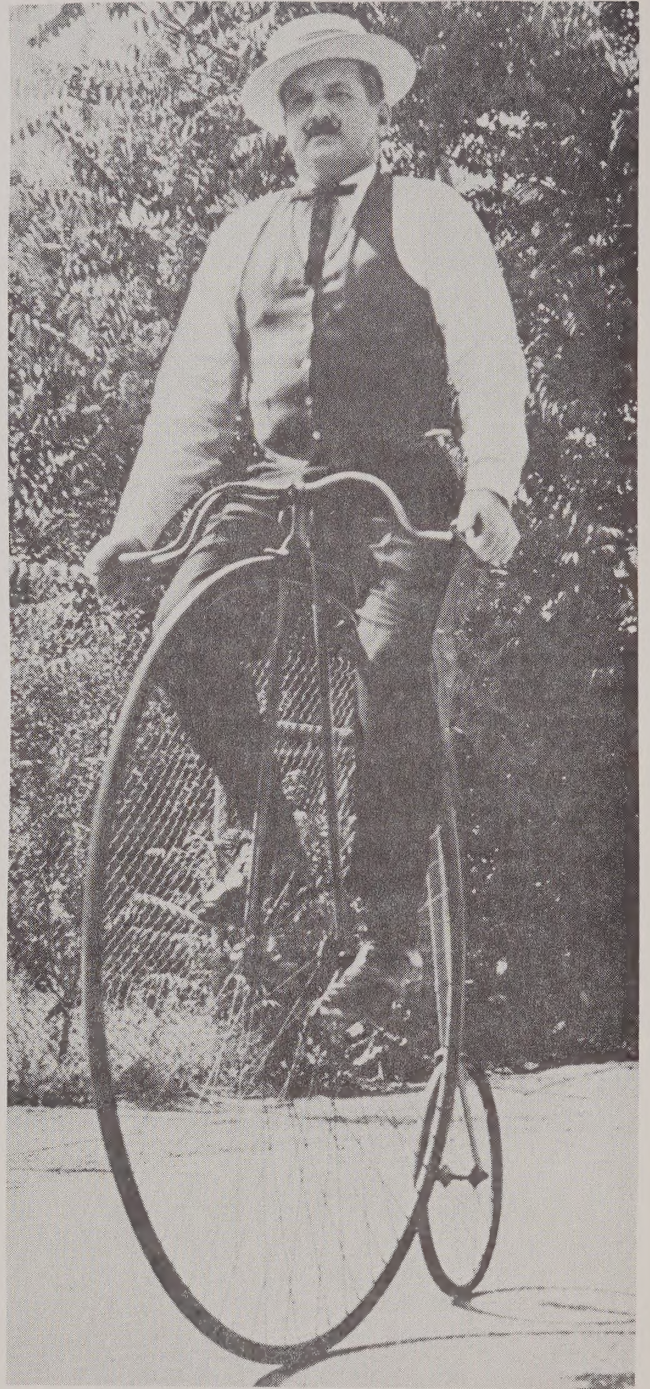
1. Recreational Bicycling Needs

A recent Department of Interior study showed bicycling has grown faster than any other summer-time activity, with an increase of over 200% since 1960. The majority of cyclists in Sacramento utilize bicycles for recreational purposes. The primary recreational bicycle facility, the American River Bikeway, receives up to 10,000 bicyclists/week during peak summer months. More citizens use it than any other single purpose County recreational facility.

The American Heart Association considers bicycling an excellent method of physical fitness by improving muscle tone, stamina and the respiratory system.

2. Recognition of the Bicycle as a Potential Transportation Mode

In the last few years, attention has been given to the utilization of bicycles as a mode of



Early bicycle models

transportation. Legislation has recognized the bicycle as a legitimate user of the nation's roads, with a share in the road-building programs. The Federal Highway Act of 1973 for the first time provided Federal funding of bicycle paths and facilities to be used as transportation.

3. Safety

According to the National Safety Council, 40,000 cyclists were injured and 850 were killed in nationwide accidents in 1971. Bicyclists' fatalities for 1973 were 1,150 and they are expected to be 30% higher this year.

Public streets and off-street facilities must be made as safe as possible for bicycle riding. Utilitarian and recreational cyclists need a safe place to cycle. Safety must also be provided for the less experienced bicycle rider who must compete with the faster and heavier vehicles on public streets.

4. Coordination of Bicycle Planning

Generally speaking, for the last fifty years in the United States, the bicycle has been assigned a low priority in traffic planning. It was viewed as essentially the responsibility of local agencies and received little centralized guidance or assistance from other levels of government. In some cases, development and implementation of bikeway plans have been uncoordinated and repetitive, with each community undertaking its local efforts largely unaware of relevant parallel or prior efforts.

The City and County of Sacramento, along with the community special districts, have established proposals for bikeways. Several segments of these proposals have already been adopted and implemented.



The bicycle can
be a very impor-
tant mode of
transportation.

Chapter 2

PROJECT BACKGROUND

The first bikeway policies ever adopted by Sacramento County and by the City of Sacramento are contained in their most recently approved general plans. The following policies are contained in the County General Plan Circulation Element.

It is the policy of Sacramento County to:

1. Actively support appropriate local and state legislation which will provide an increased level of safety and convenience for persons wishing to utilize bicycles as an alternative to other modes of transportation.
2. On a first priority basis, actively pursue the completion of the American River Parkway Bikeway and the Arcade Creek Bikeway from the American River to the American River College.
3. Concurrent with the above activities, prepare and adopt a comprehensive Bikeway Plan serving all portions of the County.
4. Implement a bikeway acquisition and construction program upon completion of the Bikeway Plan.

The City of Sacramento General Plan also contains policies relating to bikeways as follows:

1. Prepare and implement a comprehensive bikeway plan for the City which serves both utilitarian and recreational needs of the residents. This plan should be in harmony with the Countywide Bikeways Master Plan. Particular attention should be given to central city bikeways and to bicycle protection facilities at parking modes along bus routes and in major shopping centers.
2. Utilize where feasible existing programs for funding new bikeways, including the present bicycle licensing program, and explore new avenues of financing needed facilities.
3. Promote to the greatest degree possible the



Bicycling is for everybody.



separation of bikeways from the street system in order to provide even greater safety benefits to bicyclists.

4. Continue to participate in and support the efforts of the Bikeway Task Force in preparing a Bikeways Master Plan for all of Sacramento County.

As stated, both the County and the City of Sacramento, in adopted bikeway policies, recommend the preparation of a bikeway master plan which would serve all portions of the County. To this end, the County Board of Supervisors and the Sacramento City Council created the Sacramento City/County Bikeway Task Force in December 1973. An extra duty of the Task Force is to advise both jurisdictions on their respective interim bikeway projects. Other Task Force functions include:

- a) Maintain liaison with other governmental agencies to insure orderly, coordinated bikeway planning.
- b) Hold neighborhood hearings for the purpose of gathering public opinion input on the Bikeways Master Plan and establishing priorities for bikeway construction.
- c) Disseminate bikeway information to the public.
- d) Make recommendations to other governmental agencies regarding bikeways.



Summer morning on the American River
Bike Trail.

Chapter 3

RATIONALE FOR A BIKEWAY SYSTEM

Public interest in bicycling has focused the attention of public officials on issues posed by the need for safe, identifiable and pleasant bicycle facilities. An integrated system of bikeways through areas of poor circulation design, high traffic volume, over barriers such as rivers or free-ways can provide necessary access to existing and future parks, schools, shopping facilities/centers, scenic/nature routes, places of business, and government centers. The bikeway system serves rich and poor, urban and suburban, children and adults, commuters and recreational cyclists.

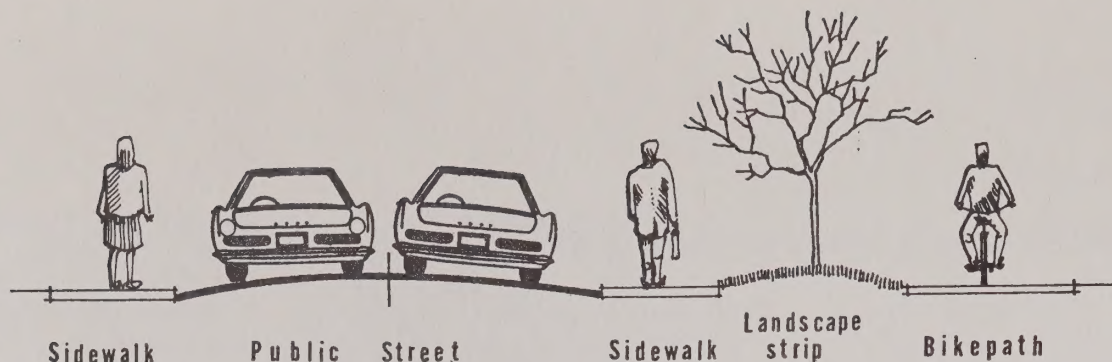
One approach to provide a measure of safety has been the development of off-street Class I bike trails separating bicycles from motorized traffic. The other approach has been the identification of certain public streets as bikeways where the use of bicycle riding can be accommodated with the least degree of conflict with automobile traffic. To minimize traffic conflicts and traffic flow problems some on-street routes have been developed with Class II bike lanes. Other Class III bike routes merely require route signing.

Definitions

Often the term "bikeway" is used to define all facilities that explicitly provide for bicycle travel. Bikeways can be anything from simple signed streets to fully grade-separated facilities. To avoid confusion, the following three classes of bikeways are defined and will be used throughout this report.

Class I - (Bike trail or Bike path)

A completely separated facility designated for the use of bicycles. The facility is separated from roads used by motorized vehicles by a physical space, berm, fence, or other barrier. Pedestrians are normally allowed use of the facility. Cross-flows by vehicular and pedestrian traffic are kept to a minimum.

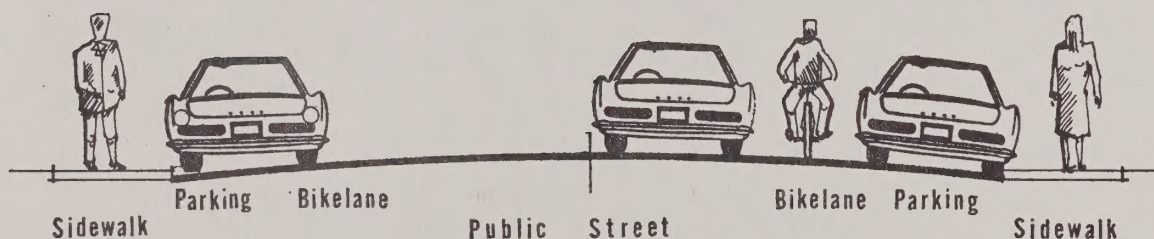


P R O F I L E

CLASS I (BIKETRAIL or BIKEPATH)

Class II - (Bike Lane)

A lane within a street or roadway designed for the one-way use of bicycles. It is an on-street facility with signs, striped lane markings, and pavement legends.



P R O F I L E

CLASS II (BIKELANE)

Class III - (Bike Route)

A shared, on-street right-of-way delineated by signs and optional legends stencilled on the pavement. A Class III bike route shares its through traffic right-of-way with motor vehicles or pedestrian traffic.



P R O F I L E

CLASS III (BIKE ROUTE)



Bicycle riders on Riverside Road.
circa 1890.

Chapter 4

GOAL

It is the goal of this Plan...

...To develop a comprehensive bikeway system for Sacramento County and City which will meet both the transportation and recreation needs of its residents.

OBJECTIVES

It is the objective of this Plan...

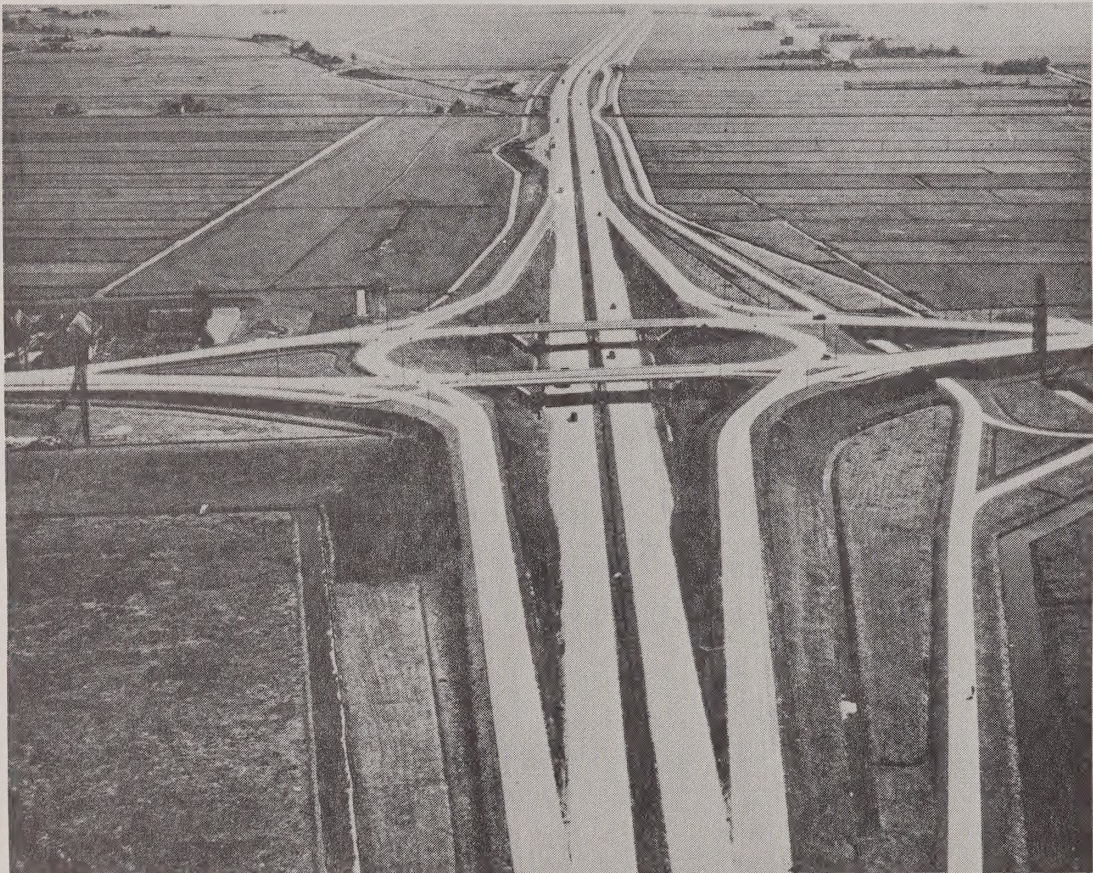
1. To integrate efforts of planning, recreation, public works and other departments of City and County government that are involved in planning, construction or operation elements of the bikeway system.
2. To provide a basis for coordinating with adjacent counties, incorporated cities and with other units of government (such as State Parks and Recreation Department and U.S. Bureau of Reclamation and Regional Transit) in the planning and development of bikeways.
3. To take full advantage of the beauty and natural features of the Sacramento area in expanding the opportunities for all people to ride on aesthetically pleasant and safe bikeways.
4. To provide a network of safe, convenient bikeways for people who want to use their bicycles for transportation to and from work, schools, shops, parks, bus transit facilities, etc.
5. To incorporate adequate signing, traffic controls and basic safety design features into bikeway plans and developments to insure a reasonably high level of safety for the bicyclist and motorist.
6. To promote educational programs, law enforcement programs and engineering standards which would bring about safety in bicycling.

PLANNING CRITERIA

The following planning criteria was used in the establishment and selection of bikeway routes.

1. Establish bike lanes on arterial and secondary arterial streets wherever possible for a basic transportation network to connect residential areas with schools, businesses, government offices, industrial areas, shopping centers, recreational areas, and other generators.
2. Integrate on-street routes with off-street bike trails.
3. Provide off-street routes to parks and schools where possible.
4. Consider separation of bikes and auto traffic whenever possible and desirable in a safe manner.
5. Avoid the establishment of bike lanes along arterials which serve as freeway access whenever possible.
6. Consider sidewalks for bike lanes only when no other solution is available.
7. Consider bikeways along existing trails, levees, railroads, streams, rivers, powerline and drainage canal rights-of-ways.
8. Consider the security of bicycles and bicyclists, ownership of land and governmental policies whenever bikeways are being proposed off-street.
9. Recognize natural physical characteristics along proposed trails.
10. Provide routes with cultural and historical orientation.
11. Provide off-street trails with picnic and parking areas.
12. Preserve aesthetic values and natural areas while planning for path clearing and improvements for mixed biking and hiking.

13. Consider and encourage multi-functional uses of trails where the uses will not be in conflict with each other.
14. Consider travel time as a factor for route planning of bikeways to be used basically for commuting purposes.
15. Provide for linking and connecting of routes; provide route continuity.
16. Consider parking facilities; provide bicycle-bus transferring methods and bicycle storage lockers at bus stops, park 'n' ride stations, train stations, etc.
17. Coordinate routes with the City, County, Regional, State and other agencies.

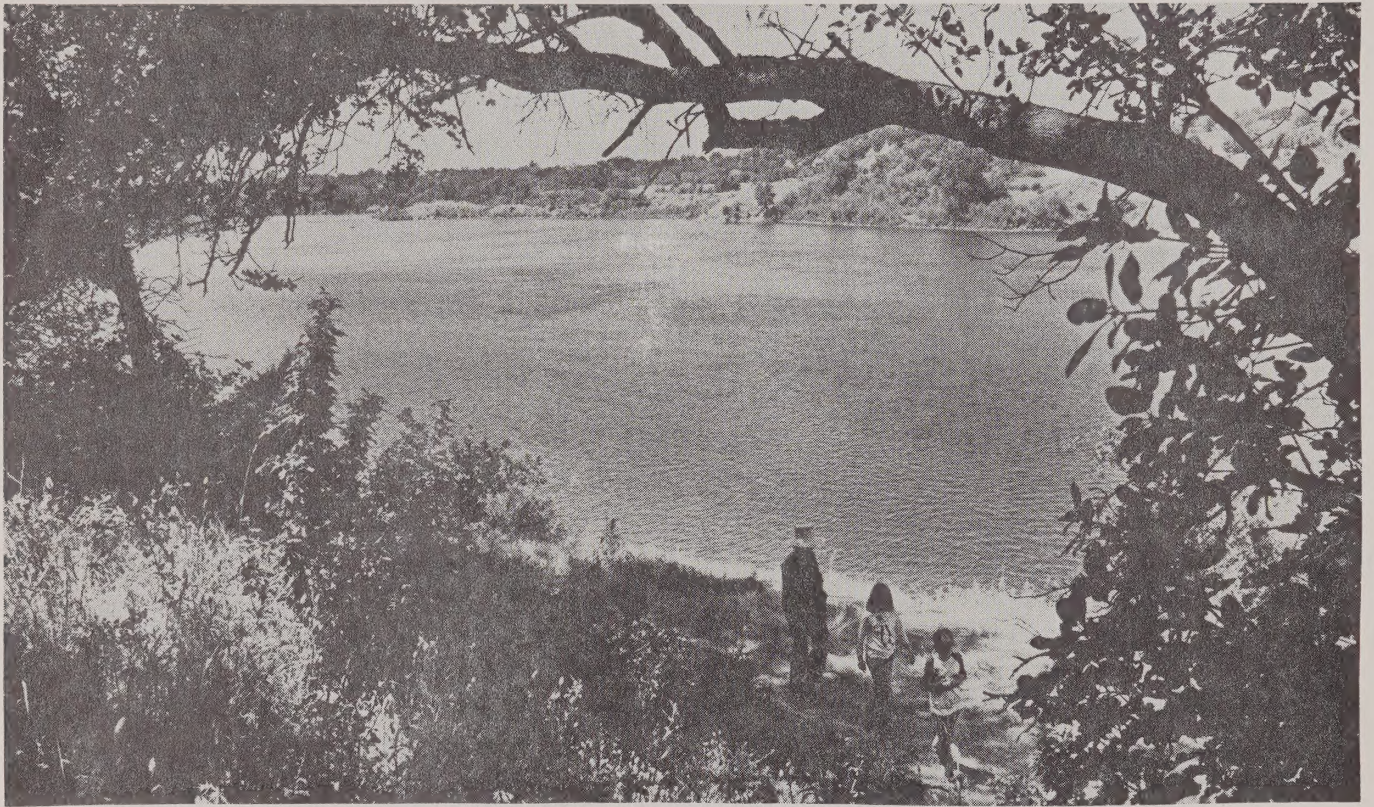


Other countries build bicycle trails alongside new highways. This cycle tract, far right, is near Amsterdam, Holland, and is provided with clear sailing under a major traffic interchange.

Chapter 5

POLICIES

1. Actively support appropriate local and state legislation which will provide an increased level of safety and convenience for persons wishing to utilize bicycles as an alternative to other modes of transportation.
2. Implement a bikeway acquisition and construction program according to the development phases and priorities recommended in the Bikeway Master Plan.
3. Provide adequate bicycle parking and lockers at all public parking facilities and at Regional Transit Park and Ride stations. Bicycle parking facilities should also be provided at all major shopping, cultural, employment, educational and recreational centers.
4. Devise and promote an effective maintenance program for bikeways and related facilities.
5. Future development proposals shall be required to recognize the bikeway master plan and plan accordingly.
6. Future residential development or subdivision proposals shall be required to incorporate in its initial design provisions for off-street bikeway facilities whenever appropriate.
7. Encourage wide usage of the bicycle as a means of conserving energy, reducing air pollution and traffic congestion as well as a method for achieving better public health.



This scenic view of Lake Natoma will someday be enjoyed by bicyclists traveling along the proposed biketrail from Nimbus Dam to the City of Folsom.

Chapter 6

ENGINEERING AND DESIGN STANDARDS

Design Criteria

The bikeways design criteria included in this section is the product of literature search and actual experience. The most comprehensive discussion of bikeway design criteria available to date can be found in the publication, Bikeway Planning Criteria and Guidelines, published in April 1972, by the California Division of Highways. It was prepared by the Institute of Transportation and Traffic Engineering at the University of California at Los Angeles.

1. Surface Material

Class I structural development criteria must be adequate to support the wheel loads of bicycles and those of maintenance vehicles that may require access to the facility.

Acceptable surface materials are asphalt concrete and portland cement concrete. Aggregate base material is acceptable for the base.

The surface material selected will depend on whether or not an all weather surface is desired. Asphalt is generally favored, since it is the least expensive and provides an excellent surface.

The surface should be resistant to abrasion and indentation, clear of loose dirt and gravel, and because of high tire inflation pressures, possess tough and stable composition.

The thickness of the surfacing material depends upon the quality of the subgrade, the surface of the earth or rock leveled off to receive the foundation of a bikeway. Although it is generally satisfactory to lay full depth hot-mix asphalt directly onto the subgrade, it may be necessary to improve the quality of the subgrade first. An acceptable way of accomplishing this is to place a three to four inch aggregate base of gravel or crushed stone on the subgrade and to lay one and one-half to three inches of asphalt over this base.

In general, asphalt concrete should be used due to its low cost, long life, smooth surface and ease of maintenance. An open graded mixture of three-eighths inch maximum aggre-

gate and paving asphalt grade AR 4000 placed with an asphalt paver is recommended for general use. It is suggested that the asphalt content be from one-half to one percent higher than that normally used on highway paving projects.

For all but the poorest quality basement soils (R-value less than 5), 0.25-foot thick asphalt concrete placed directly on prepared subgrade of basement soil is considered adequate.

In order to protect the surface material from damage by vegetation, it is necessary to apply a long-lasting pre-emergence herbicide. This sterilization of the soil is necessary when a bike trail or path is constructed on bare soils. If trees are removed, it is important to remove all surface roots.

2. Speed

Generally, for on-street bike lanes, the design speed of the roadway is adequate for bicycles. Although bicycles can be pedalled at speeds in excess of 30 mph, experimentation conducted in Davis, California showed the average bicyclist velocity to be between 10 - 11 mph. This figure is generally accepted as a conservative value for bikeway design purposes.

In the event touring routes are developed apart from existing roads, a higher design speed should be used, perhaps as high as 25 mph. Similarly, downhill curves should be adjusted to reflect probable speeds that will be attained.

The following design speeds establish the minimum standards which facilities should meet for the conditions noted:

<u>Conditions</u>	<u>Minimum Desirable Design Speed (MPH)</u>
Urban (city streets, not a separate bike path)	15
Open country, level or undulating; separate bike path in urban areas	20
Long downgrades	30

3. Capacity

Bikeway capacity requirements, estimated in number of bicycles per hour, appear to be of relatively insignificant import in the United States.

4. Clearance and Width

Since the cost of providing bikeways varies with the width, it is important to determine the most economical width necessary to accommodate the bicyclist, allowing for lateral maneuvering between passing bicyclists, and lateral clearances for obstructions and other hazards.

Choice as to what width specification is to be used depends on many factors. For example, if available space is not a factor, a more liberal standard should be adopted. In some cases, the width of construction equipment and maintenance vehicles may make development of a wider Class I bike path less expensive in the long run. On the other hand, if available space is a problem and the anticipated use of the bikeway is not excessive, the conservative minimum standard might be in order. The normal recommended minimum width for a paved Class I bike path is eight (8) feet. This meets both the minimum width standards for two-lane operation and coincides with the configuration of most asphaltic-concrete laying equipment.

Early construction of the American River Bikeway used an eight foot width. Later, this width was increased to ten feet and then twelve feet. This increase in width of the American River Bikeway reflects the high usage of the facility.

5. Vertical and Horizontal Clearance

The desirable minimum overhead clearance to obstructions is eight feet. The minimum recommended horizontal clearance to obstructions from the edge of the pavement is three feet.

6. Recommended Lane Width for Class I and II Bikeways

- a. Minimum desirable bike lane width, 5' including gutter.
- b. Standard bike lane width, 6 feet.
- c. Normal maximum bike lane width, 7 feet.

- d. Minimum desirable bike lane width, 6 feet when speed limit greater than 45 mph.
- e. Normal minimum Class I bikeway width, 8 feet for two directional bike traffic.
- f. Desirable Class I bikeway width for two-way bike traffic, ten feet.
- g. Concrete gutters may be used for Class II bike lane width.
- h. Vehicle parking lanes normally should be 8 feet wide including gutters.
- i. Bike lane width is a function of traffic volume and speed.
- j. At some locations, it is desirable to combine the bike lane and parking lane. This configuration is delineated by a single six inch wide white stripe. Minimum width is six feet and maximum width is nine feet not including the curb and gutter.

7. Grade

Cyclist characteristics (age, weight, conditioning, oxygen intake, etc.) bicycle characteristics (gear ratios, type of bicycle, tires, weight, etc.) and the road surface have a bearing on the maximum acceptable gradient and length of a bike route grade. Existing topographical features will often restrict the options as to grade, but in general, it is desirable to design the minimum grade rate feasible, even if this increases the length of a facility. Although in special situations steeper grades may be tolerated for a few hundred feet, 5% is the maximum grade rate recommended for most designs. It is desirable that sustained grades be limited to 1% to 2%, if a wide range of riders is to be accommodated.

A level ramp at least 15 feet in length should be provided at intersection crossings to permit the bicyclist to stop without rolling. The importance of this ramp increases as the difference in elevation between street and bike trail increases.

8. Horizontal Alignment

Radius of Curvature

Radius of curvature is generally of no concern in regard to bike lanes developed on existing road alignments

since the roadway design should be more than adequate for bicycles traveling at reasonable speeds.

Care must be taken to avoid sharp angles and short radius curves when constructing bike paths, particularly at the bottom of a long downhill grade where the velocity of a descending bicycle can be quite high.

The minimum radius of curvature of horizontal curves must be consistent with design speed, safety, grade profile, type and use of facility, topography, and reasonable construction cost.

Below is the minimum radius of curvature for specific design speeds, assuming a superelevation of .02 ft/ft:

<u>Design Speed (mph)</u>	<u>Minimum Radius (ft)</u>
10	15
15	35
20	65
25	100
30	140

The minimum radius can be decreased approximately 2% for each .01 ft./ft. increase in superelevation. However, in general, it is recommended that superelevation not exceed .05 ft./ft. Lower superelevations will generally tend to fit the terrain, minimize earthwork, lessen drainage problems and accommodate average speeds better. It is suggested that curves with radii less than 100 feet be widened one foot on the inside for each 25° of central angle, up to a maximum of four feet of widening.

On curves, superelevation should be applied by rotating the pavement around its inside edge, in order to avoid the creation of low spots in which drainage water can accumulate.

Sight Distance

Sight distance is the length of bike route ahead visible to the rider, including intersecting roads and driveways. Sufficient sight distance must be provided so that the rider can either stop or take evasive action to avoid a collision when he comes upon an obstruction or another vehicle along the bike route. An adequate lateral view must be available at intersections and driveway connections.

Passing sight distance is not considered, due to the relatively low speeds and high maneuverability of bicycles. The following are recommended minimum stopping sight distances for various design speeds:

<u>Design Speed (mph)</u>	<u>Stopping Sight Distance (ft)</u>
10	50
15	80
20	120
25	160
30	200

Stopping sight distance is measured from the rider's eyes which are assumed to be 4.25 feet above the pavement surface to an object 0.5 foot high on the bike route.

Stopping sight distance at grade crests may be checked using the following approximations:

$$\text{When } S \leq L, L = \frac{AS^2}{872}$$

$$\text{When } S > L, L = 2S - \frac{872}{A}$$

Where: S = Sight distance in feet
 L = Length of vertical curve in feet
 A = Algebraic difference in grade rate in percent.

Stopping sight distance in undercrossing separations should be checked to ensure adequate sight distance beneath the overhead obstruction.

9. Drainage

Bike path drainage facilities should be designed to prevent washouts and to avoid ground saturation beneath the pathway. It is recommended that a 2% cross slope be provided along the bike path to insure proper drainage. Overflow of surface water should not be allowed as the resultant deposit of sand and gravel would create a dangerous obstruction, especially to the modern thin-tired bicycle.

Ditches may be in order for flat areas with poor soil drainage, while in particularly wet areas, underdrains are recommended.

Drainage Grate Hazards

While existing drainage systems incorporated into road rights-of-way are normally sufficient for both bike lanes and bike routes, exposed drainage grates can be hazardous. The danger lies in the possibility of the bicycle wheel becoming entrapped in the exposed grate.

Side-opening storm drains are recommended, where feasible. However, when only grates are feasible, their design should be zig-zag, perpendicular to bicycle movement, or some other type to prevent danger. Cross straps may be attached to existing unsuitable grates, but care must be taken when modifying drainage grates since their design is generally based on hydrodynamic principles.

10. Separation of Bike Lane from Traffic Lane

Painted Line

The painted line provides in many respects the same legal and actual functions as the line dividing traffic lanes. It serves as a reminder that the lane is therefore primarily for the benefit of the bicyclist. Furthermore, the bike lane, when properly used, can bring about an orderly flow of traffic, motorized or otherwise.

Raised Pavement Markers

Raised pavement markers often referred to as "botts dots" are used to audibly identify the bike lane boundary. Raised pavement markers can be used with a combination of other methods and can be reflectorized for visual discernment at night. Although these raised pavement markers can be of some assistance to motorists they may constitute a problem to the bicyclist. Therefore, they are not recommended.

Raised Curbs

The raised curb provides a definite separation between the motorized traffic lanes and the bike lane. A non-mountable raised curb offers physical separation from motor vehicles.

Raised curbs within a roadway, whether mountable or not, are not recommended for general use. These curbs can easily create safety problems of more significance than the encroachment problem which they are supposed to prevent. A

raised curb is one more obstruction to be avoided by bicyclists and motorists.

Raised curbs should be used only when special safety circumstances necessitates the prevention of vehicle encroachment into the bike lane. If curbs are used, sufficient clearance and lane width are essential. Adequate clearance must be allowed so that bicycle pedals do not catch on the curb.

Grade Separation

Grade separation of bicycles from motor vehicles through the use of overpasses and underpasses provides the most complete separation. However, they are usually not economically feasible.

Fencing or Barriers

Fencing or other barriers to insure safety may be required for bike paths located in close proximity to canal banks, cement-lined flood drainage channels or active waterways. Hedges, trees and native growth are an aesthetically desirable barrier along stream beds.

On long structures a physical separation such as a four foot chain link fence, positive barrier or island is usually desirable between motor vehicle and bicycle traffic. (Where volumes are light, cost effectiveness considerations may dictate the omission of the separation in the case of one-way bicycle facilities). On short bridges painted stripes to delineate bike lanes will frequently suffice. It is desirable that outside bridge railings along bikeways be a minimum of four feet high so as to minimize the likelihood of a cyclist falling over the railing in the event of an accident.

11. Signing and Marking

Adequate signing is an important requirement of bikeway design. Proper signing will help to (1) warn bicyclists of unexpected conditions or hazards, (2) establish the right-of way, (3) discourage motor vehicle encroachment in bike lanes, (4) warn motorists and pedestrians of the presence of bicycle traffic, (5) control bicycle and motor vehicle traffic, (6) inform bicyclists on a Class I trail of their

location in relationship to streets and exist, and (7) inform bicyclists on Class I trails of the location of first aid stations and emergency phones.

Sacramento Recommended Standards

Bikeway signs and markings should be standardized to provide universal comprehension or understanding by bicyclists and motorists alike. The State of California Traffic Control Devices Committee has developed standards which have been approved by the State Department of Public Works and recommended for use by cities and counties.

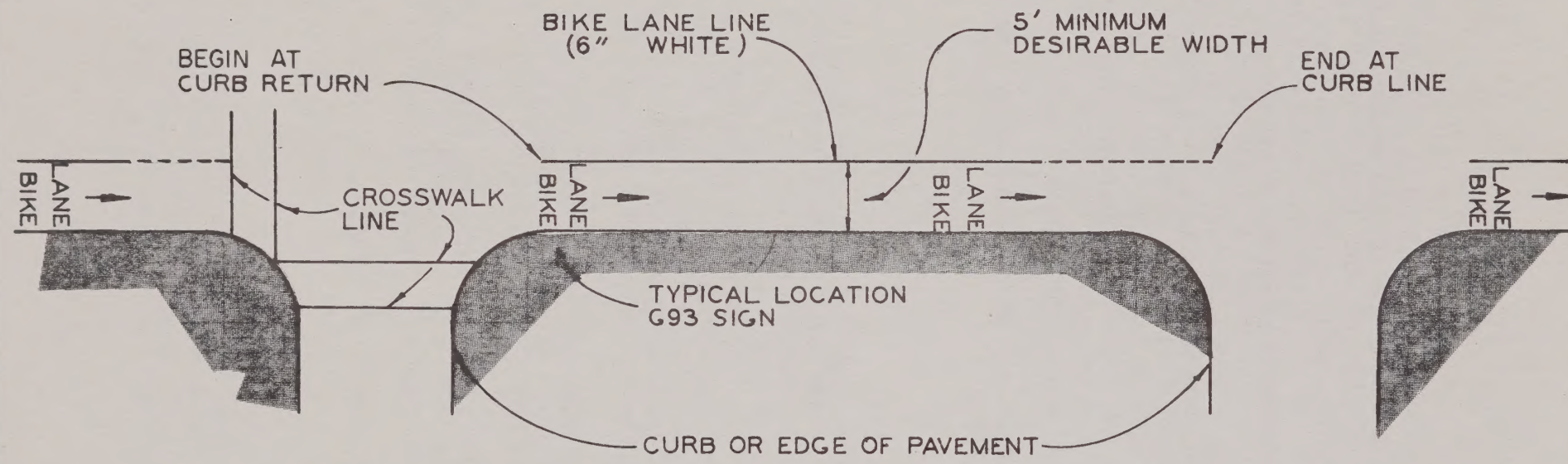
These uniform standards should be adhered to in the greatest extent possible.

1. Striping

- a. A six-inch wide solid white line is intended to separate a bike lane from a motor vehicle lane (Plate 1, page 28).
- b. Parking lines may be used to help keep parked vehicles from encroaching on the bike lane and discourage vehicle use of the right-hand area as a lane. Parking lines may be four-inch wide solid white lines (Plate 1A, page 29).
- c. Bike lane striping will begin at the end of the curb return. The stripe ends at the curb line of an intersecting street. (Plate 1).
- d. The recommended taper length of a traffic lane, constructed in the direction of travel, is: $\text{Length of Taper} = (\text{speed limit}) \times (\text{offset})$.
- e. Minimum bike lane line length, 75 feet.

2. Pavement Legends

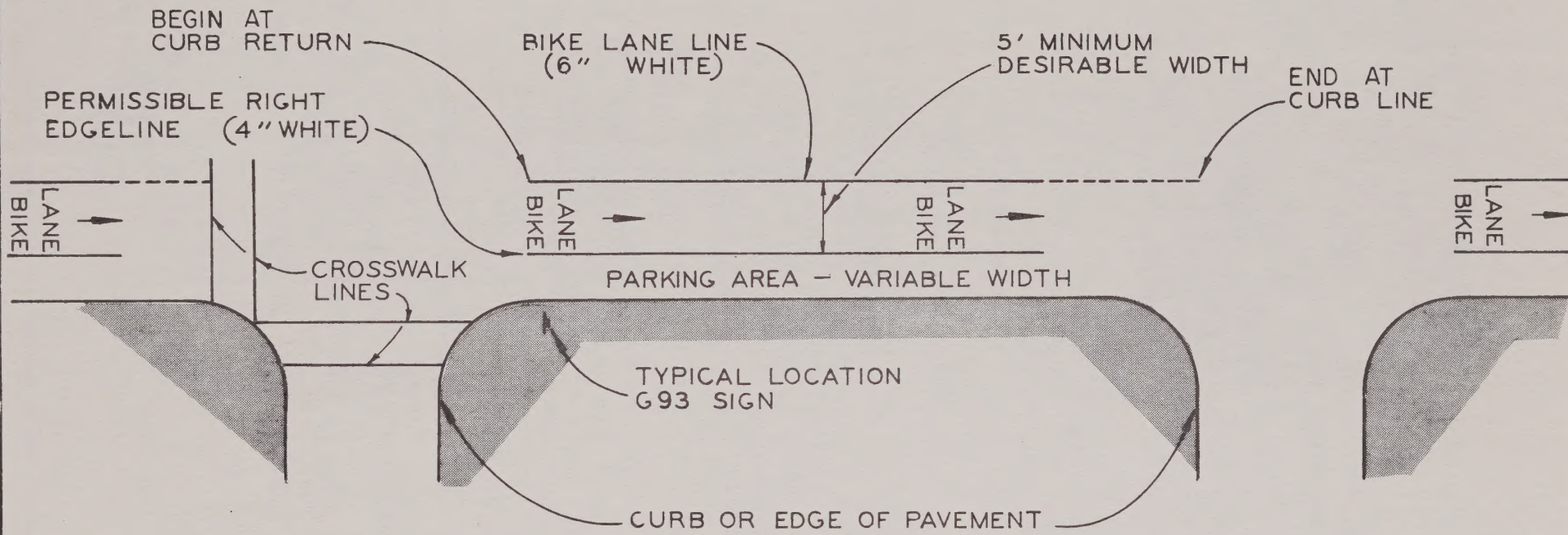
- a. The standard pavement legend will be the words "Bike Lane" supplemented by an arrow showing the direction of travel (Plates 1 and 1A). The letters should have a minimum height of four feet.



TYPICAL BIKE LANE MARKINGS

NO SCALE

ALTERNATE LEGEND: ONLY
BIKE



TYPICAL BIKE LANE MARKINGS

NO SCALE

ALTERNATE LEGEND:  ONLY BIKE

PLATE 1A

- b. The legends should be placed approaching and leaving each major intersection and may be placed at other locations. (Plates 1 and 1A). They should also be placed at specific driveways where high traffic volume is generated, such as at large shopping centers.
- c. The wording, "Bike Only" with the "Straight Ahead" arrow is a permissible alternative legend for bike lanes where cities or the county have restricted vehicles from the lane by ordinance.
- d. The symbol of a bicycle may be used supplemental to the pavement legend words, but should not be used alone. The bicycle symbol should be comparable in size to the words.

3. Guide Signs

- a. The standard G-93 bike route sign will be the basic device to advise the motorist to expect bicycles along a particular route (Plate 2, page 31). It is applicable for a bike path, bike lane, or bike route. The words "Begin" or "End" may be used supplemental to the sign, as appropriate. The standard signs already established for the benefit of the motorist will also apply to the bicyclist.
- b. The guide sign should be placed at all route turns, after leaving main intersections and at appropriate places between intersections if intersections are widely spaced. Spacing for the bike route signs between intersections should be approximately the same as speed limit signs, (not to exceed one mile and at major cross streets), to advise both the motorist and the bicyclist of an established bicycle route.
- c. Scenic Route signs, City Logos or City Symbols such as the "Swallows" in San Juan Capistrano may be used supplemental to the G-93 sign.

4. Warning Signs

- a. The bicycle crossing sign (W-79), in the California State Traffic Manual, shall be the



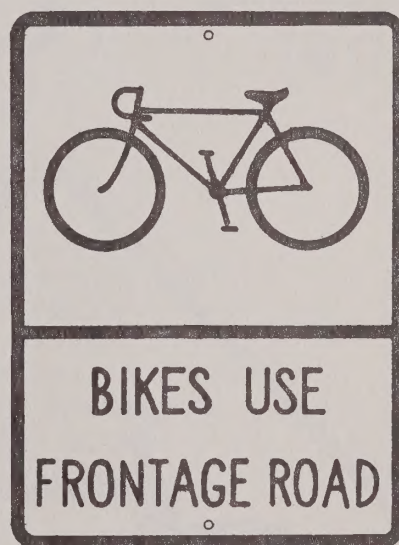
G93



BMUS



EBL



BUF



R81

SACRAMENTO COUNTY
DEPARTMENT OF PUBLIC WORKS
HIGHWAYS & BRIDGES DIVISION

BIKE LANE
SIGNS STANDARD

SCALE:
DATE:

DRAWN BY:
CHECKED BY:

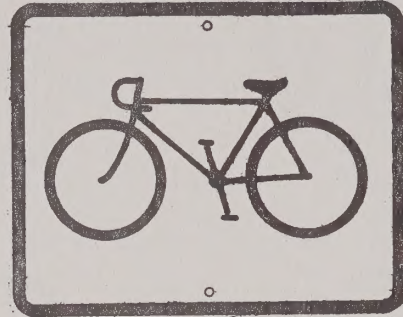
PLATE-2

R26



R81

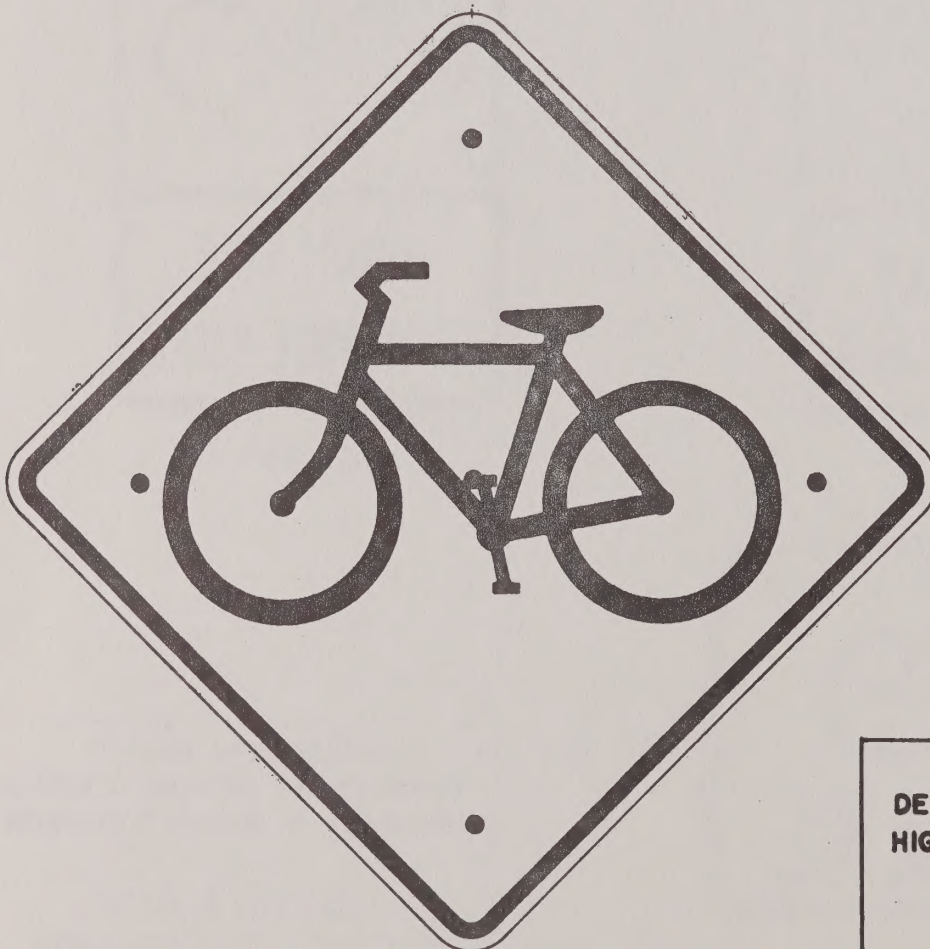
G60



R26S



R81



W79

PLATE-2A

SACRAMENTO COUNTY
DEPARTMENT OF PUBLIC WORKS
HIGHWAYS & BRIDGES DIVISION

BIKE LANE
SIGNS STANDARD

SCALE:

DRAWN BY:

DATE:

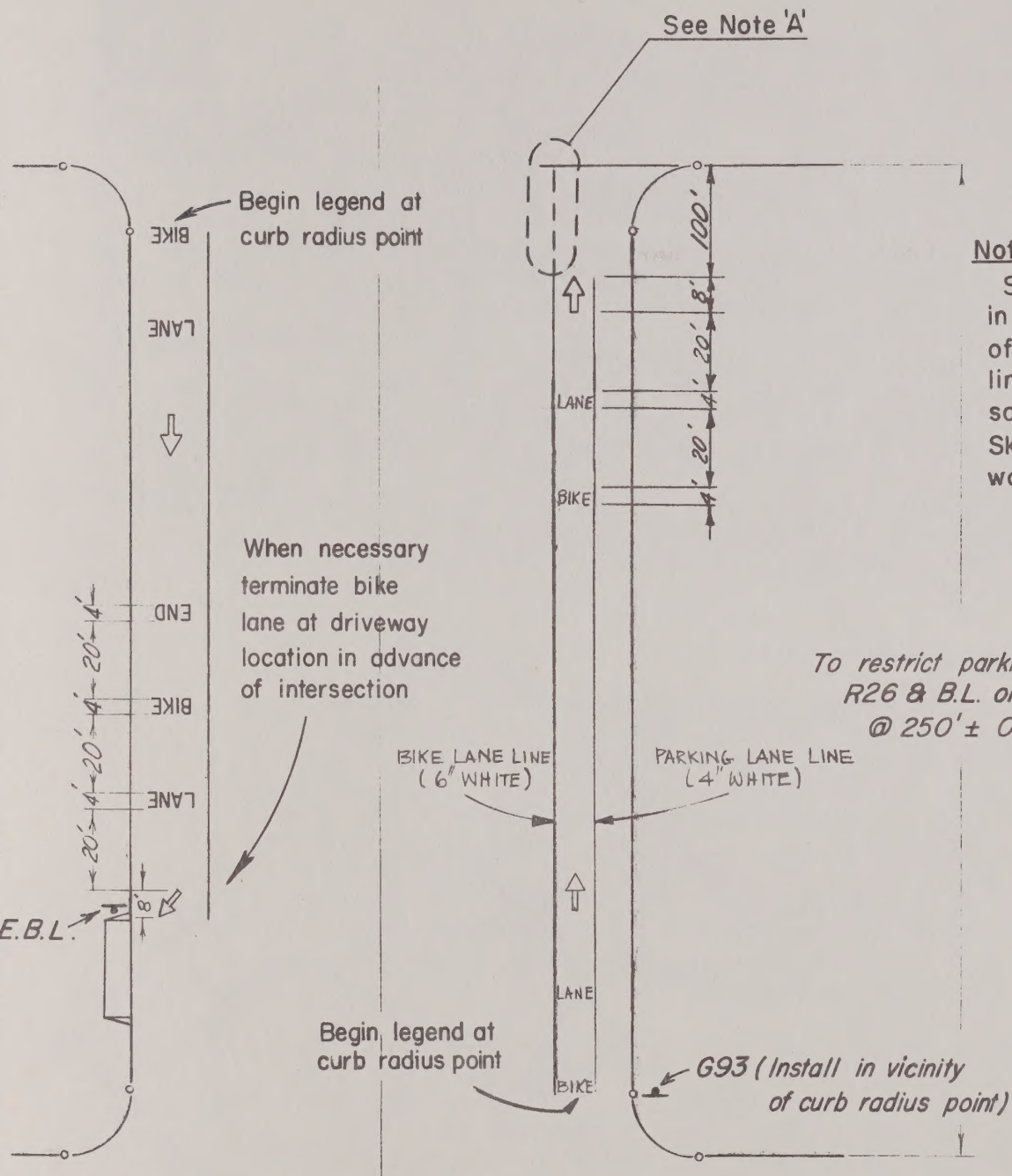
CHECKED BY:

standard warning sign for use in advance of a point where an officially designated bike path or bike trail crosses a roadway (Plate 2A).

- b. In certain situations where the addition of the bicycle lane creates a new condition warranting a warning to both motorist and bicyclist, standard warning signs should be used. An example might be a bridge which would qualify for a "NARROW BRIDGE" sign after the addition of a bikeway.
- c. Scaled down, smaller size versions of the standard warning signs may be used on the bike paths or bike trails (not within the roadway).
- d. The standard warning signs placed on public streets and highways for the benefit of the motorist also apply to the bicyclist.

5. Regulatory Signs

- a. A new black and white regulatory "Bike Lane" sign (Plate 2) is intended for use when positive control signing is needed in addition to the G-93 "Bike Route" sign to deter vehicle or other encroachments on bike lanes. For the case of parked vehicles, the "Bike Lane" sign may be used in conjunction with any applicable sign from the standard "No Parking-No Stopping" series, R 26 through R 32 (Plate 2A, page 34). For other applications, the "Bike Lane" sign may be used by itself.
- b. Other regulatory signs may be needed relative to the interaction between motor vehicles and bicycles on roadways with bike lanes, particularly in the vicinity of intersections. No specific additional signs are recommended at this time because of insufficient knowledge and experience in the varied and complex problems involved.
- c. Practically all of the regulatory signs controlling vehicles within the roadway will also apply to bicycles in the bike lanes. No additional or duplicate regulatory signs would normally be necessary for the bicyclist.



SACRAMENTO COUNTY DEPARTMENT OF PUBLIC WORKS	
BIKE LANE SIGNING & STRIPING STANDARDS	
SCALE: NONE DATE: 7-73 DRAWN BY: DS & RD	Plate-3

6. Lighting

Since bicycle headlights are for the most part a "to be seen" and not a "to see with" accessory, bikeways for night operation should be adequately lighted. It is desirable that bikeways utilizing community roads and streets be located on well-lighted roadways.

Specific illumination requirements for bikeways are exceedingly rare. However, in most cases, existing roadway lighting will be sufficient for bike lanes and routes.

The lighting of bike paths will obviously be done on a selective basis, primarily in public parks and recreation areas. In these cases, the lighting of bike paths will most probably be only part of a more extensive park facility lighting scheme, not only to illuminate the bikeway for the bicyclist, but also to discourage socially unacceptable behavior.

Special Signing and Marking Requirements

When special signs or markings are needed and are not within the scope of the state recommended standards for bikeways, they should be designed in accordance with the general state and national standards with respect to shape, color, dimensions, and reflectorization.

1. Special Bikeway Signs Developed by Sacramento County

a. "End Bike Lane" Sign (Plate 2, page 31).

The purpose of this sign is to notify the bicyclist that he may use the sidewalk as an extension of an on-street bike lane where there is insufficient roadway width to continue the bike lane on the street. This sign is placed where the bike lane terminates mid-block.

b. "Bikes May Use Sidewalk" Sign (Plate 2).

The purpose of this sign is to notify the bicyclist that the designated bike lane continues on the sidewalk.

c. "Bikes Use Frontage Road" Sign (Plate 2).

The purpose is to notify the bicyclist that he must ride on the frontage road. This sign is placed only when there is insufficient pavement width to accommodate a designated bike lane within the main roadway.

2. Sign Location

Because of the absence of motor vehicles, signs may be placed closer to the edge of a bike path than to either a bike lane or bike route. This is advantageous as it is made more visible to the bicyclist. Lateral displacement from the bike path should be approximately three feet. Vertical clearance from the ground to the base of the plaque should be approximately eight feet to avoid pedestrian conflict with the sign.

Positioning of Warning Signs

Warning signs for bicyclists and motorists should be provided for bike lanes, bike routes, and areas where bike paths are interrupted by cross traffic lanes. Warning signs for motorists should conform to standard roadway practices. Warning signs pertaining solely to the bicyclist should be positioned according to the existing requirements for each situation. The ITTE report, Bikeway Planning Criteria and Guidelines, recommends that warning signs be located at least 50 feet in advance of an unexpected condition.

Intersection Signs

In urban areas it is recommended that the "Bike Route" sign be located at intersections involving bikeways. At a major intersection with no visual obstructions present, the sign should be placed at the far side of the intersection.

Recommended Legend Location and Spacing

Urban

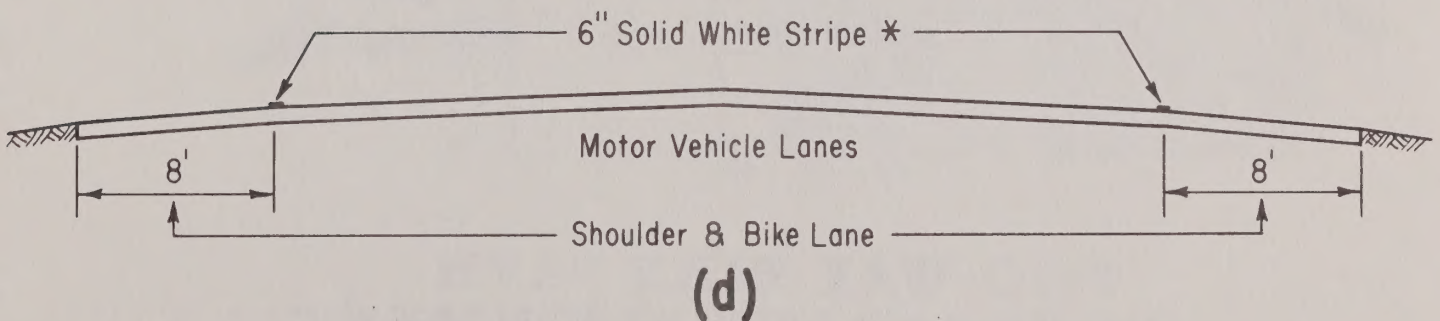
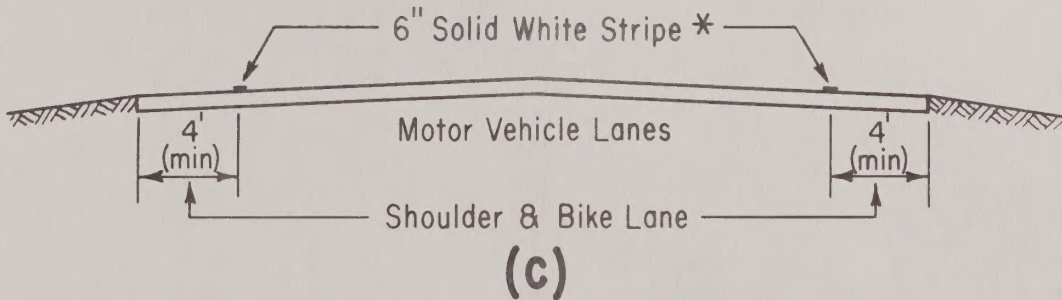
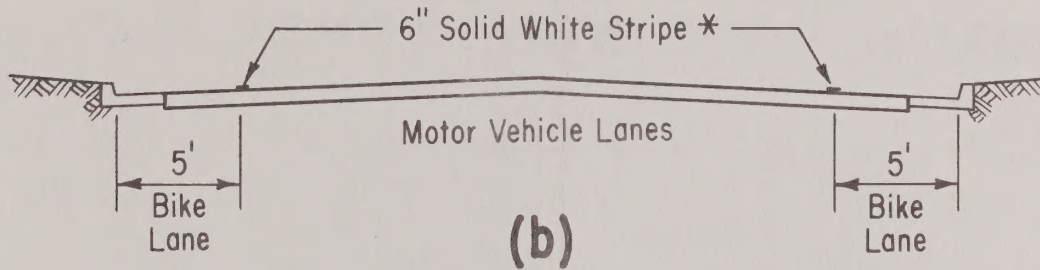
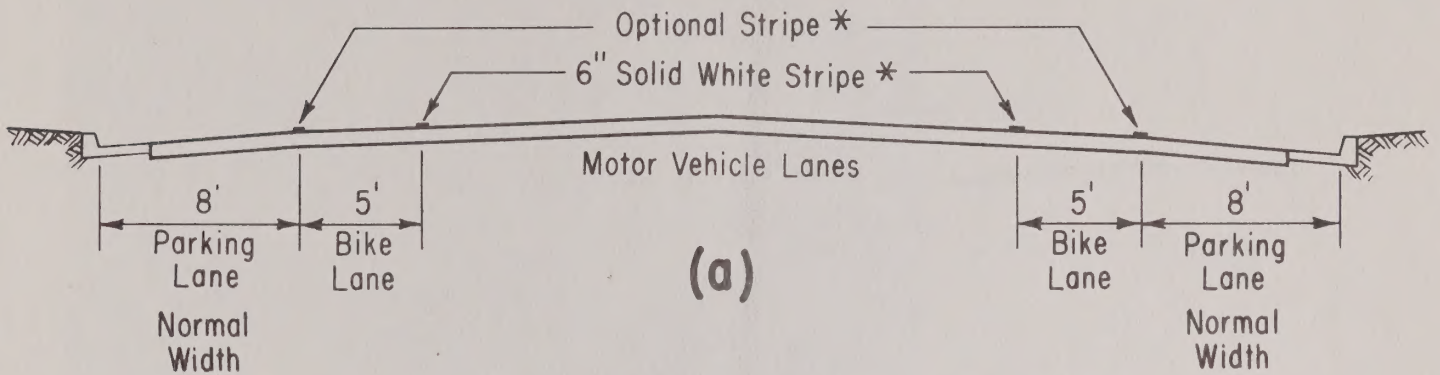
1. Minimum desirable spacing 300 feet.
2. Maximum normal spacing 1,300 feet.
3. With no cross street access and a minimum of driveways, legend spacing may be stretched up to 1,500 feet.
4. Spacing of legend segments 20⁺ feet.
5. Use legend at ends of midblock parking, not less than minimum spacing.

Rural

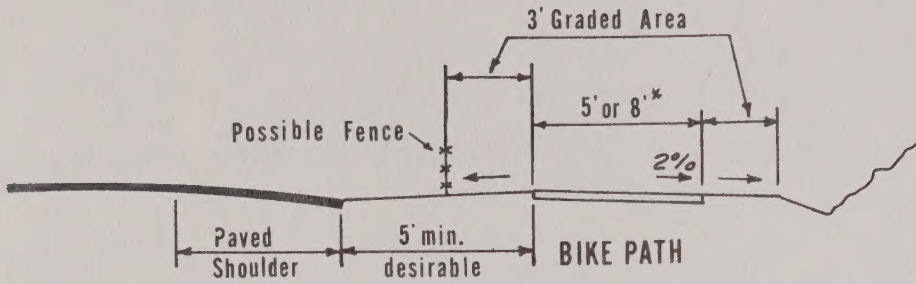
1. Minimum desirable spacing 1,300 feet.
2. Maximum normal spacing 5,000 feet.
3. Use four legends at major intersections.
4. Use two legends at far side of minor intersections.
5. Use three legends at major T-intersections.
6. Use one legend at minor T-intersections.

TYPICAL BIKE LANE CROSS SECTION

on 2-lane or Multi-lane Highways

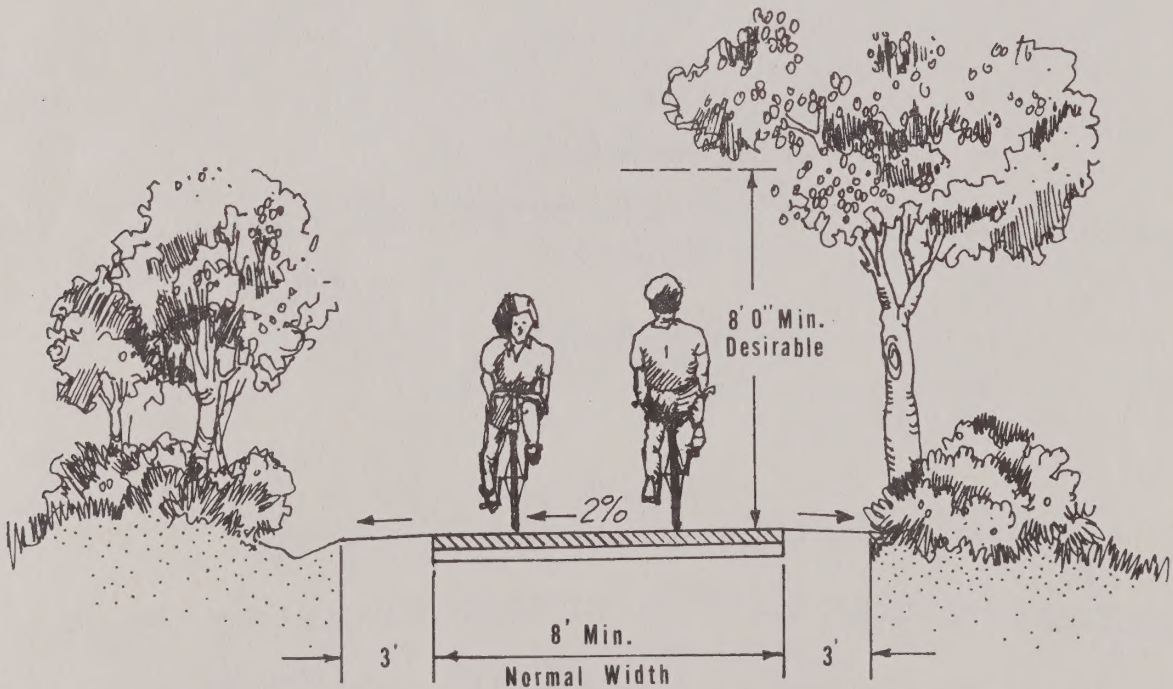


*....Final Striping Plan subject to Traffic Branch approval.

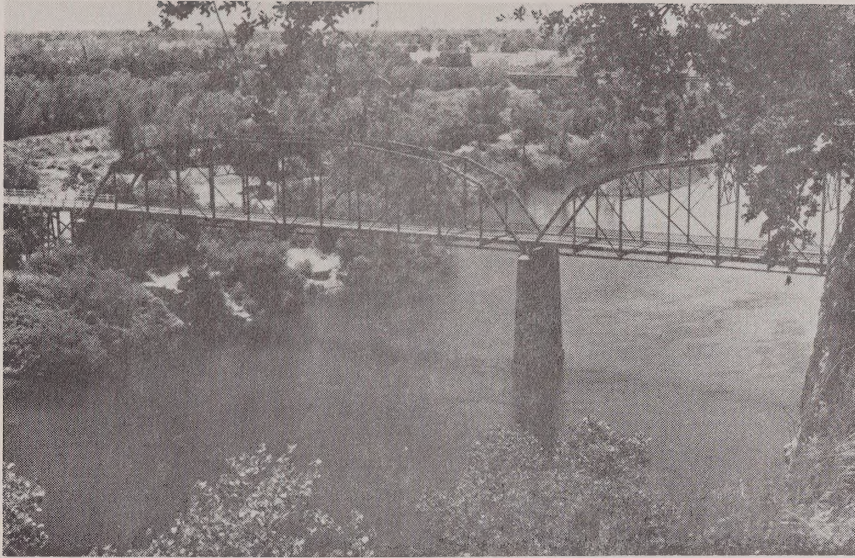


1-Way 5' Minimum Desirable Width
2-Way 8' Minimum Desirable Width

TYPICAL SECTION BIKE PATH ALONG FREEWAY



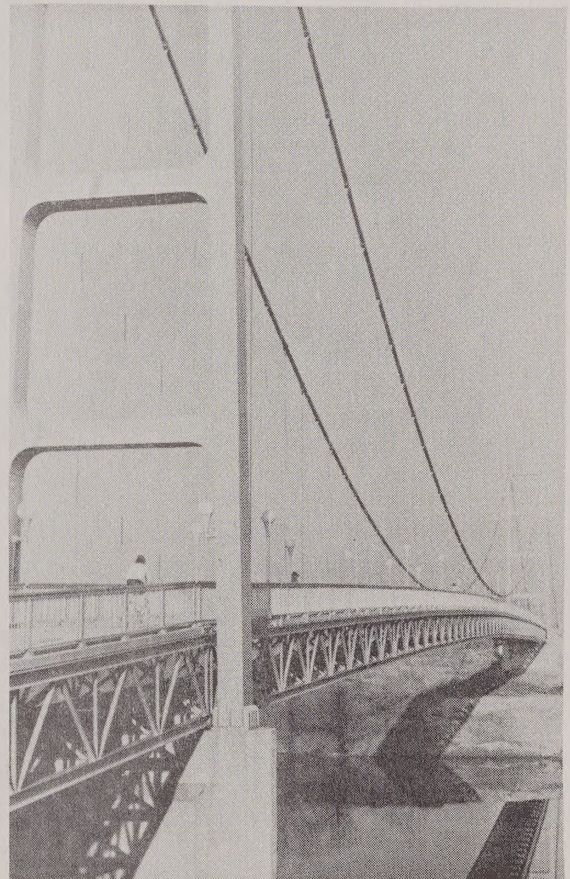
TWO-WAY BIKE PATH ON SEPARATE ALIGNMENT



Fair Oaks Bridge



Jibboom St. Bridge



Guy West Bridge

Bridges over the American River
used for bicycle crossing.



Scenic views along the American River Bike Trail.

Chapter 7

BICYCLE SAFETY

A definite need exists for an improvement in bicycle safety. Nationwide, bicycle related deaths increased 73% between 1961 and 1971. In the four year period from 1969 to 1972, fatalities and injuries in bicycle related accidents nearly doubled, (see Table 1). The bicycle accident data for 1970 through 1973 in Sacramento County, (see Table 2) indicate more bicycle accidents were reported in 1973 than in 1970. As the utilization of bicycles continues to increase rapidly in Sacramento County, so too does the potential for bicycle accidents; therefore, it is important for bicycle safety to be an integral part of this Master Plan.

The National Safety Council has determined that approximately three-fourths of all bicycle related injuries and deaths involved children under the age of 15. The Bicycle Institute of America estimates that the eight year old is the most accident prone bicyclist, and urges early education in traffic regulations and proper riding techniques.

Studies done by the City of Sacramento show that those aged 13, 14, and 15 have the most bicycle accidents in the City. For somewhat older riders and notably those inexperienced with riding ten-speed bicycles in fast automobile traffic, accidents have also increased dramatically.

The most frequent type of accident involves falls and collisions. According to recent surveys, the great majority of bicycle fatalities result from bicycle-auto collisions, and most of these collisions occur at intersections. The most common causes are wrong-way riding, failing to yield right-of-way, disregarding traffic signs, signals and markers, making improper turns, and riding double.

There are other conflicts found in the present system of shared roads. Differences in merging speeds, limited sight distances at intersections, the presence of dynamic obstructions (parked cars opening doors in the path of a bicyclist), poor maintenance, weaving and improper turns at road crossings and intersections all contribute to the generation of motor vehicle/bicycle accident involvements.

Another factor in bicycle safety is that the nature of a bicycle is different from an automobile. A bicyclist tends to sustain injuries far greater and more frequently than the driver of a car due to the limited protection and low mass of the bicycle. Visibility is another variable that

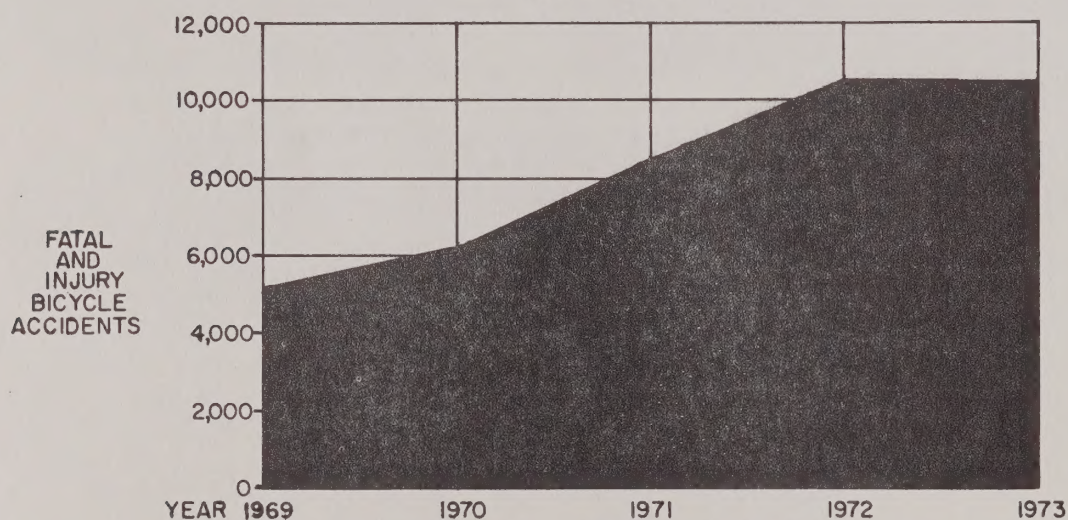
CALIFORNIA ACCIDENT STATISTICS 1969 - - 1972

Table 1 BICYCLISTS KILLED AND INJURED BY AGE BY YEAR

AGE	1969*		1970		1971		1972	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
0-4	2	124	-	81	1	101	3	152
5-14	46	4,148	67	4,637	55	5,219	75	6,610
15-24	8	839	11	1,131	27	2,515	24	3,118
25-34	3	122	1	151	1	230	10	434
35-44	1	67	-	71	2	88	1	123
45-54	1	38	2	55	1	59	2	112
55-64	3	28	1	44	3	52	3	59
65 & over	4	39	4	42	4	56	9	68
Not stated	1	38	1	42	1	38	1	167
TOTAL	69	5,443	87	5,304	95	5,478	128	10,643

*Adjusted figures

FATAL AND INJURY BICYCLE ACCIDENTS 1969-1973



FATAL AND INJURY BICYCLE ACCIDENTS BY YEAR

	YEAR			
	1969	1970	1971	1972
Total fatal accidents	4,427	4,277	3,953	4,426
Fatal bicycle accidents	66	89	98	129
Percent of total	1.5	2.1	2.5	2.9
Total injury accidents	159,927	158,391	160,182	172,197
Injury bicycle accidents	5,178	6,313	8,471	10,493
Percent of total	3.2	4.0	5.3	6.1

SOURCE: CALIFORNIA HIGHWAY PATROL

differs between the two modes. It is difficult for bicyclists to see behind them. Motorists have trouble seeing bicycles on their side and at night.

It was recently found that one out of four bicycles involved in accidents were mechanically defective. In 1974 the Consumer Product Safety Commission ranked bicycles as America's greatest product hazard and has issued safety regulations effective January 1, 1975.

Safety is a product of the attitude and behavior of the bicyclist under the prevailing street and traffic conditions. In order to have an effective bicycle safety program adequate attention must be given to the important factors of education, enforcement and engineering. Ignorance of the rules, poor safety practices and habits, weak enforcement of the laws, poor design of bike lanes and inadequate bikeway maintenance contribute to dangerous cycling conditions.

Education

There is no coordinated course in bicycle safety offered in the regular curriculum of the school districts. It is the option of each individual school whether or not to devote class time to bicycle safety. Historically, local bicycle safety education programs consist of a law enforcement officer upon request, speaking at schools. Outlines of the present safety education programs for the Sheriff's Office, City Police, California Highway Patrol and the Sacramento Safety Council are included in the appendix.

There are certain aspects that should be considered in a safety education program. Bicyclist education should emphasize how to follow the vehicle code regarding bicycles and how to properly inspect and maintain bicycles. It should include on-the-bicycle on-the-road training. The program should also include an explanation of the reasons and purposes of a bikeway system. By learning to utilize the features of the system and to interact safely with automobiles on the roadway, accidents can be prevented.

The California Traffic Safety Education Task Force has developed principal objectives of a bicycle safety education program. These include:

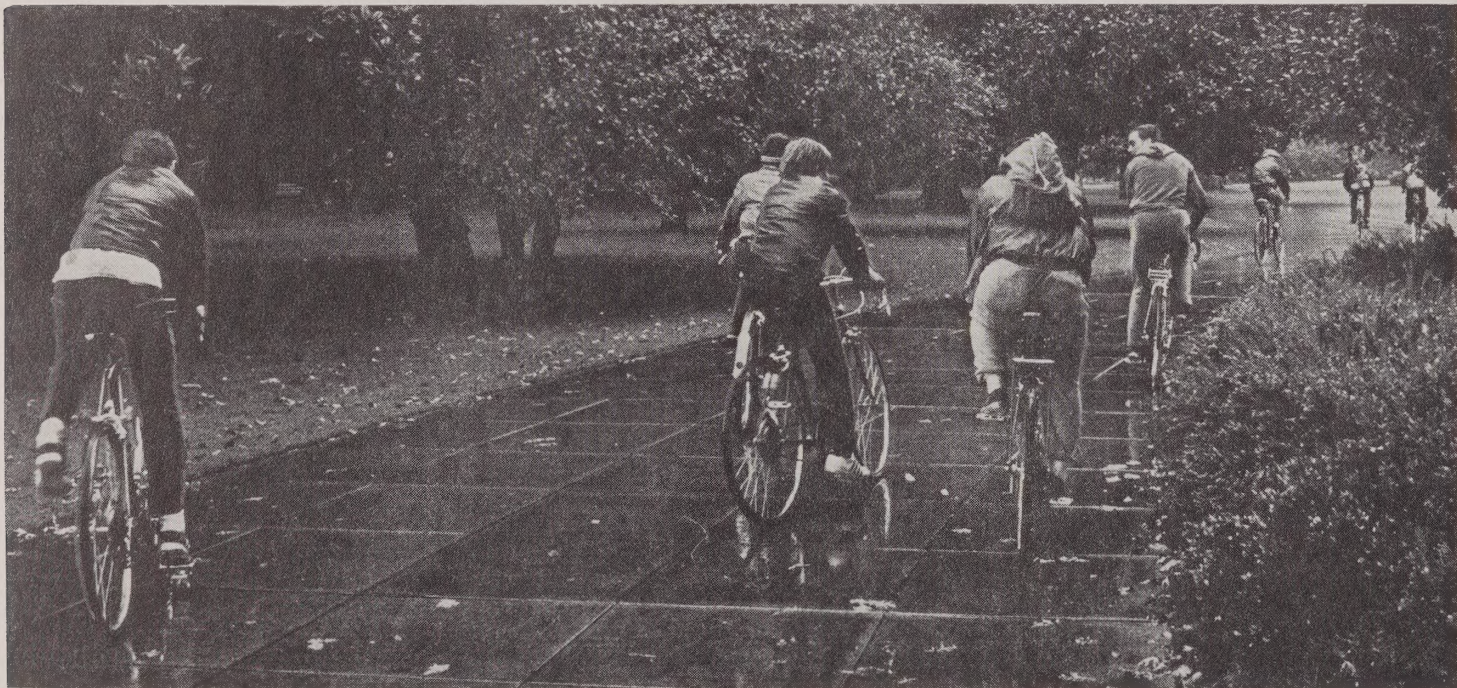
- a) Raise the present level of bicycling expertise among cyclists.
- b) Develop a desire to cycle safely and the knowledge to do so in varying traffic conditions.

Table 2
SACRAMENTO COUNTY
Bicycle Accident Data 1970-1974

PRIMARY TRAFFIC COLLISION FACTOR	Number of Accidents									
	1970	%	1971	%	1972	%	1973	%	1974	%
Riding on wrong side of road	42	27	76	32	62	23	64	27	74	28
Against traffic control device	7	5	20	9	32	12	26	11	37	14
Riding out from behind visibility obstruction or out of driveway	26	17	28	12	24	9	23	10	26	10
Cutting in front of overtaking vehicle	13	8	43	18	33	12	31	13	54	21
Riding at night with no lights	8	5	7	3	9	3	14	6	6	2
Miscellaneous	58	38	60	26	105	40	78	33	65	25
TOTALS*	154	100	234	100	265	100	236	100	262	100
AGE BRACKET (Bicycle Riders)										
0-4	4	3	2	1	2	1	1	.4	-	-
5-8	34	22	36	15	30	12	31	12.6	40	15
9-14	82	54	115	48	129	50	115	50	149	57
15-20	21	14	62	26	62	24	58	25	48	18
21 and over	12	8	24	10	34	13	27	12	25	10

*Total of accidents does not equal total bicycle riders because the number of people involved in accidents varies.

Source: Sacramento County Department of Public Works, Traffic Section.



Riding through the State Capitol Park

- c) Teach and develop a realistic attitude toward other road users on the part of both bicyclists and motorists.
- d) Lay the groundwork for development of safe traffic attitudes and skills that will contribute to safe traffic flow.

These objectives should be adopted and implemented in bicycle safety programs in Sacramento County.

A bicycle training program could be based on the Bicycle Institute of America Standards concerning:

- a) Balance, pedalling, braking, mounting, maneuvering, stopping, turning, signalling, and operation of 10-speed bicycles, and,
- b) Reading and comprehending signs.

Bicycle safety education should be provided for all age levels. The age group that should have first priority in any bicycle safety education program are elementary school children. The high percentage of accidents occurring due to the young cyclist being at fault strongly supports the need for early bicycle training. The motor skills, perception and cognitive abilities needed to operate a bicycle effectively in the urban environment are not completely developed in children. Consideration could be given for bicycle education as part of the physical education programs in local schools.

Bicycle safety education classes should be continued for the age group in junior high and high school. The Federal Highway Act of 1973 adds bicycle safety education to all driver education courses, and this provision should be implemented. The advantages of this recommendation are the education of future drivers in the presence and operation of bicycles on the road and the elimination of the need to conduct special programs for bicyclists in this age group.

Concern for safety should also be encouraged in adults. The National Safety Council reports the proportion of bicycle/ motor vehicle crash deaths for bicyclists over 15 has increased from 22% in 1960 to 50% in 1972. Courses designed for people who are not in public schools, such as adults and pre-schoolers, could be made available through public agencies such as the Department of Parks and Recreation and the Department of Adult Education.

Educational programs should be developed for motorists and law enforcement officers to inform them of the capabilities and limitations of bicycles and bicycle riders.

All available educational resources should be explored and developed. The public's awareness of bicycle safety could be enhanced by incorporating bicycle safety suggestions into mass media programming. This could be done through public service announcements, posters, California Highway Patrol commercials and film shorts on bicycle accidents, and safety films distributed to schools, clubs, etc. Bicycle safety information could be disseminated through newspapers. Pamphlets of "Bicycle Laws" written in easily understood language, could be distributed at major meeting places. An on-going multimedia public education program in bicycle safety could be extremely beneficial, especially for new residents unfamiliar with California bikeways and traffic laws.

It could also be beneficial if a bicycle education and resource materials center were to be established at Discovery Park in the American River Parkway. This center could be a headquarter for bicycle safety training classes, an interpretative center for visitors, and help in consciousness expansion for all bicyclists. Another educational feature would be to provide interpretative information to trail users at strategic locations.

Enforcement

The most important aspects of bicycle safety in the field of enforcement are legislative needs and an effective enforcement program.

The major legislative need is the necessity of uniform bicycle laws applicable to the entire State of California, with ordinances applicable to specific needs. Currently, local bicycle ordinances vary from jurisdiction to jurisdiction creating problems for enforcement agencies and confusion for bicyclists. Numerous and conflicting ordinances make both compliance and enforcement difficult. A safe and free flow of vehicular traffic depends on an organized system of behavior, producing regularity and predictability.

A bikeway system should be designed to function within the normal vehicular rules of the road. Any variation which makes it difficult to anticipate the action of others may result in a confused and possibly hazardous traffic situation. If special laws for bicycles and bike lanes are kept to a minimum, confusion and unpredictability could be minimized.

The California Highway Patrol estimates that two out of three bicycle-automobile accidents occur because a law or safety rule was violated by the bicyclist. One way to decrease accidents is to increase enforcement of bicycle laws. Since Santa Barbara police began a strict enforcement of laws, there has been a corresponding decrease in bicycle accidents. A similar policy of enforcement has occurred in the City of Davis, with a subsequent drop in the bicycle accident rate.

Enforcement officers should have the attitude that bicycles, when operated on public streets, are not toys and should be treated as any other highway vehicle subject to the same traffic laws. To achieve this goal, training programs for traffic officers should give attention to improving the driving habits of bicyclists in the presence of automobile drivers, and vice versa.

The purpose of police enforcement on off-street trails is primarily to provide security and safety for bicyclists and adjoining property. There have been reported cases of unsafe bicycling practices resulting in serious collisions or falls. Law enforcement along the American River Bikeway is presently shared by the City Police and the Sheriff's Department. The City has a jeep patrol and the Sheriff's deputies use small motorbikes and horses.

At present, no facilities for first aid or emergency assistance exist along the bike trails. Telephone or call boxes and emergency access points should be installed at major crossings of off-road bikeways in order to provide easy and fast contact with the police in case of emergencies.

Engineering

Chapter 6, Engineering Standards, discusses most of the safety aspects of engineering bikeways. The unique needs of bicyclists must be fully considered in the planning, construction and maintenance of bikeways. The following is a brief discussion of the difficult bikeway design and safety problems of intersections.

Intersections

Intersections are one of the most dangerous points on a bikeway for it is here where autos and bicycles may come into direct conflict because of direction changes. In many cases, the bike lane ends or is marked with a dash line when

it comes to an intersection. The cyclist must either use the sidewalk and pedestrian crossing or ride into the motor vehicle lanes. Research is under way on intersection design, and the field is open for innovative solutions.

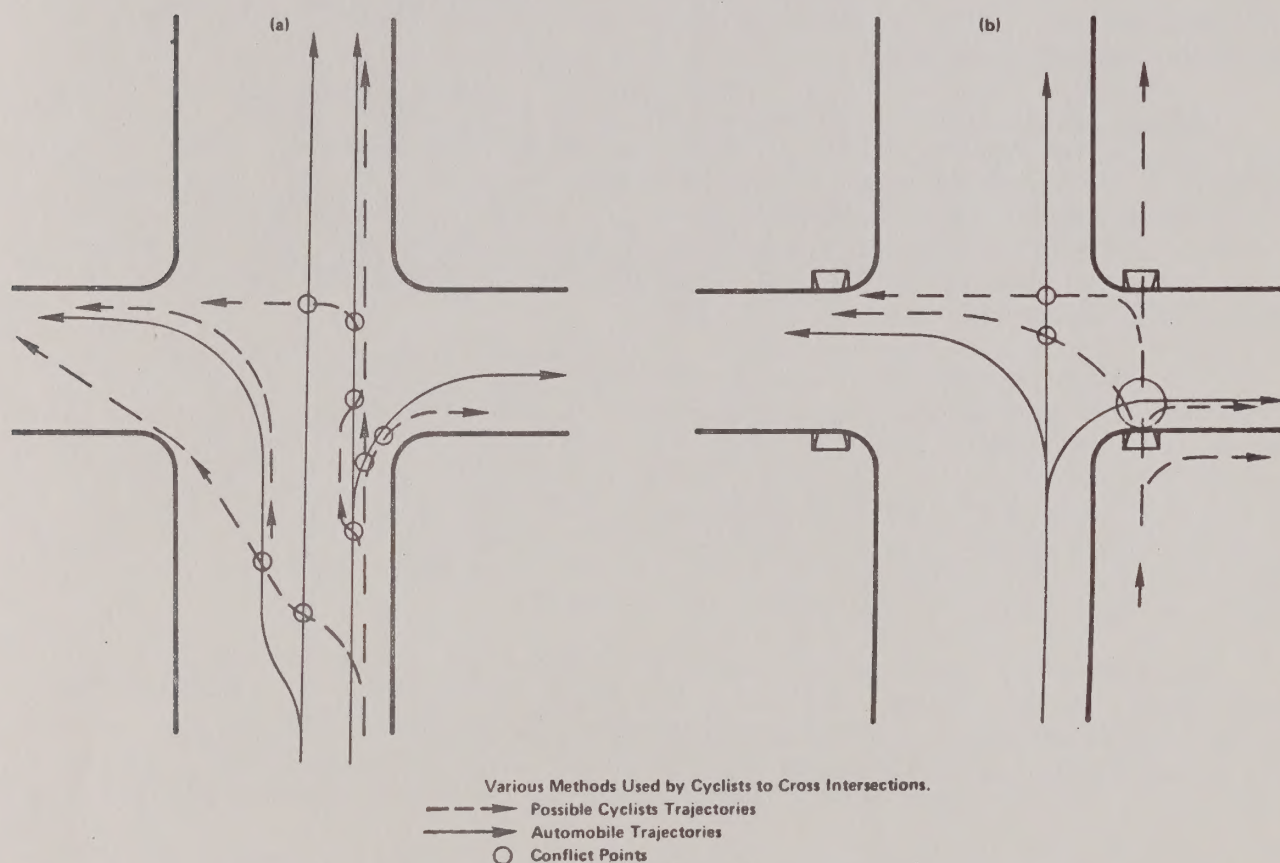


Figure 1

Figure 1 illustrates several types of motor vehicle/bicycle conflicts at intersections. Especially prevalent are accidents involving straight-through bicycle traffic and right turning motorists. If the motorist does not see the bicyclist, the motorist may turn immediately in front of or into the bicyclist causing a collision. The bicyclist should treat motorists in the right-hand lane as potential right-turners and the motorist should be aware of the bicyclist at intersections. Dashed lines at the intersection approach is taught by some as an aid in alerting the two modes of travel

to each other. However, the effectiveness of the dashed line remains to be proven.

Left turns at intersections are difficult maneuvers for a bicyclist. Basically, there are three options. One option is to use the pedestrian crosswalk and ride or walk across the street with the pedestrians. Although this method of turning takes extra time, it is the safest way through the intersection. The second option is to ride from the bike lane on the right side of the road across other traffic lanes to the left turn lane and then proceed like any other vehicle. This is usually less safe than option one. The third option is the illegal turn, with the cyclist making his left turn from the bike lane and cutting across traffic which puts him in the path of cross and oncoming traffic without warning to either.

Intersections with signals that can be activated by automobiles or pedestrians should also have some means of being activated by cyclists. Sacramento County has developed vehicle detectors that can detect bicycles. Some motor traffic signals are timed so that the interval may not provide enough time for the cyclist to cross the street. An automobile needs four or five seconds to cross an intersection, a cyclist needs eight to ten seconds. If the vehicle time is too short, the cyclist should be encouraged to use the pedestrian push button and go through the intersection in the pedestrian crosswalk. Sloping curbs permitting access to the push button mechanism should be considered for cyclists so they do not need to dismount.

The Traffic Engineering Divisions of the City and the County Departments of Public Works should assess bicycle accidents at intersections and seek solutions to mitigate the problems.

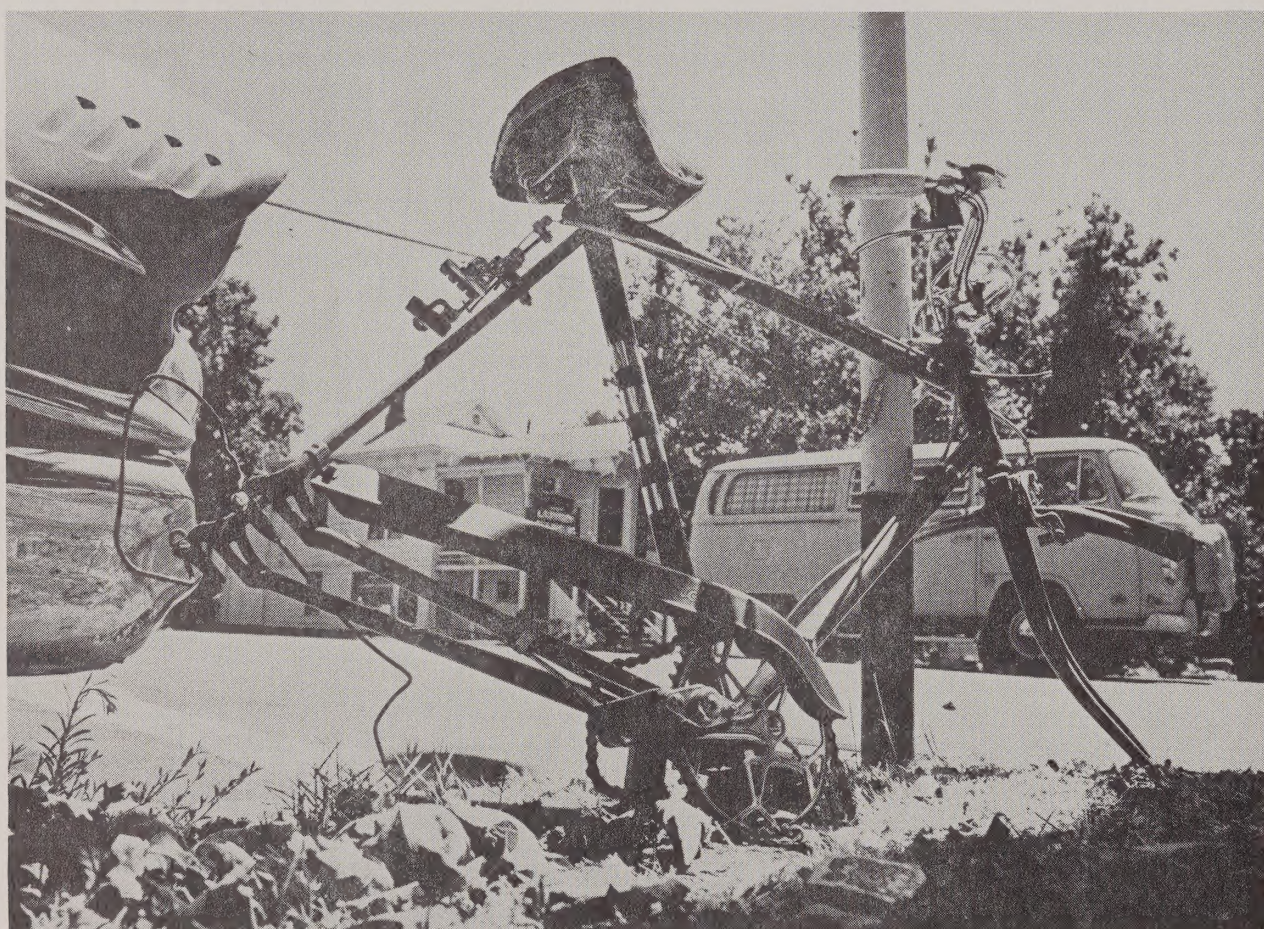
Summary

Procedures for the collection and analysis of bicycle accident data must be further developed. This data should give the frequency, rate, location and causes of accidents. Agencies in the government and private sector which have developed bicycle accident reporting and data analysis systems, should coordinate and correlate their information to improve the definition of the bicycling safety problem. Prevention of such accidents can then be analyzed and recommendations can be made to prevent them.

Bicyclists should realize that despite their legal rights, they are vulnerable, and defensive riding is essential

for survival. If bicycles are to be a viable, efficient and effective part of the transportation system, they should be safe. Safe riding entails knowledge and observance of laws and safety rules, enforcement of the laws and safe facilities.

Education, enforcement and engineering personnel should work closely together with the objective of curtailing the high bicycle accident rate by effectively seeking the highest possible degree of bicycle safety.



Sometimes even a stout chain and heavy lock are not deterrent to thieves.

Chapter 8

BICYCLE PARKING

As the number of bicycles being utilized for transportation purposes increases, so does the need for more adequate parking facilities. Bicycles propped against convenient stationary objects (trees, posts, buildings) may constitute a detriment to aesthetics, movement and safety. Theft of expensive 10-speed bicycles in the Sacramento Region has been and continues to be a concern for bicycle owners. Improved bicycle parking facilities are highly recommended.

Design

The design of the parking facility should be efficient in securing the bicycle, conserving space and should harmonize with the environment. Racks and other devices should be designed so as to easily accommodate locking the bicycle's frame with a standard length bicycle chain.

Theft prevention devices associated with bicycle storage facilities are being tried on an experimental basis at chosen locations within Sacramento County.

One method is to simply weave a chain through the frame and wheels and secure with a lock. This makes the cycle inoperable, but it must be under surveillance as thieves can pick the bicycle up and take the lock and chain off at their convenience. Another method is to lock the bicycle to a stationary object, such as a sturdy post, rack, or eye-bolt. A third method is to enclose the bicycle in a locker closet, cabinet or other lockable space.

Location

The proposed system of bikeways should include bicycle parking facilities at principal destination points. The location of parking facilities, in order to be convenient for the cyclist, must be as close as possible to the destination for ease and security reasons. In a large complex of buildings, it is better to have a number of small parking fixtures close to the various destinations rather than a few large parking facilities located further from individual destination points. An advantage of smaller rather than one large parking fixture is that they are more easily increased, decreased or moved to meet changing needs.



A Sacramento family at a trail lunch stop in the American River Parkway as other cyclists ride by.



Bicyclists enjoy the view of many historical buildings throughout Sacramento.

Places of business and other generators of traffic should provide parking facilities for cyclists. Consideration could be given to bicycle parking facilities in automobile parking areas. Facilities should be provided for public agencies, service organizations, institutions or firms adjacent to bikeway routes. Governmental agencies should provide bicycle parking space without charge to the cyclist/employees as an encouragement to greater bicycle use.

Bicycle parking facilities could be placed on sidewalks or if impractical due to limited space or heavy pedestrian traffic, they could be situated on the street pavement next to the curb where motor vehicles generally park. Bumper posts or curbs could be used to protect these spaces from automobile encroachment. Basement parking for downtown offices should also be considered.

Signing to inform cyclists of locations of bicycle parking could be added to the system. As an example, the international parking symbol (see Plate 2A) with a bicycle design has been used in Switzerland for this purpose.

Park 'n' Ride

Bicycles could be a very effective mode of delivery for people who do not live within walking distance to a bus stop. In a 1970 study conducted by a research team from California State University at Sacramento in cooperation with the Sacramento Transit Authority, SRAPC and the Division of Highways, it was found that less than 5% of transit patrons will walk over one-eighth of a mile to ride a bus. Those who live farther than walking distance will primarily use park 'n' ride facilities. These facilities are bus stops located in an area where cars may be parked, such as shopping centers. The eight-to-five commuter could ride a bicycle to a park 'n' ride facility, park and lock it, and ride the bus to work. Bicycles should be incorporated into the planning of location and design of bus stops. Bike routes should connect with transit stops, terminals and transfer stations.

In order for bicycles to be used in a viable multimode transportation system, secure parking facilities must be provided. Bike lockers are the most effective in terms of security from theft or property damage. However, there must also be alternative methods of locking bicycles, such as free bicycle racks for those who wish to use them.



The American River Bike Trail is named in honor of Jedidiah Smith, an early explorer of the American River.

Chapter 9

BIKEWAY PLANNING AND DEVELOPMENT STATUS

Bikeway planning began in Sacramento in 1962 when a preliminary trail pattern was included in the American River Parkway Plan. The first trail was constructed along the American River in 1967, and since that time, trails and on-street bikeway facilities have been planned and developed by the County and the City of Sacramento.

Outlined below are those bikeways that have been officially adopted by the County, City, and parks and recreation districts in the unincorporated area of the County. Also listed and described are those portions of the approved plans which have been implemented up to December, 1974.

Sacramento County

The County has developed an extensive portion along the American River, the American River Bikeway. The first segment of trail began in 1967 with the laying of a 4½ mile, eight foot wide trail from Discovery Park to the Southern Pacific Railroad tracks near Cal-Expo. In 1969, a two mile extension was added to the trail, to the Ethan Way entrance at Cal-Expo. Another extension of six miles was opened to the public in 1972. This extension resulted in a continuous trail on the north side from Discovery Park to the Rio Americano High School area. Since then, the bike trail on the south side of the river has been constructed from Goethe Park to the Old Fair Oaks Bridge. Approximately eighteen miles of bike trail now exists along the American River. When the north and south bank trails are connected with a bridge in the vicinity of the Arden Bar and Goethe Park area, the trail will extend uninterrupted from Discovery Park to the Nimbus Hatchery, a total of 23 miles.

An off-street bike trail was adopted in 1972 in Ancil Hoffman Park. This trail is completed and is 1.8 miles long.

A bike trail along the Folsom South Canal from Nimbus Hatchery to Sloughhouse Road has been developed. The trail should be completed sometime after January 1975 and will be approximately twelve miles long. As of December 1974, a two mile - stretch from the Nimbus Hatchery to Sunrise Boulevard is open to the public.

A plan to provide 4.3 miles of trail along the east levee of the Natomas East Drain Canal has recently been approved. The trail will extend from the American River

Parkway to the proposed Carl Hansen Park. The estimated completion date is approximately mid-1976.

An initial system of 87 miles of on-street bike lanes was approved by the Board of Supervisors on May 29, 1973. Adopted bikelanes for the fiscal year of 1974 to 1975 consist of an additional 64 miles, making a total of approximately 151 miles of on-street bikelanes. A list of these routes is included in the appendix.

The General Plan of 1973 discusses bikeways in its Transportation Element. The Plan suggests that the completion of the American River Bikeway and the Arcade Creek Bikeway together with a comprehensive bikeways system should be actively pursued.

The approved North Highlands North Central Area Plan identifies on-street bikeways for future development. All other community plans will incorporate the Bikeways Task Force proposals pending the adoption of the Master Plan by the Board of Supervisors.

City of Sacramento

Completion of the Core City Route, adopted June 1971, provides City residents with a utilitarian bikeway. It is eight miles long and extends from California State University at Sacramento to Miller Park via the State Capitol.

A plan for a 1.5 mile biketrail along the Sacramento River from Jibboom Street Bridge to Historic Sacramento was adopted November 1973, but has yet to be developed.

The City adopted the American River Bikeway in September 1969. Sacramento County has, with the cooperation of City officials, developed the nine mile stretch of the trail within the City.

A 0.5 mile bike path within William Land Park has been developed. The route extends from 11th Avenue to Sutterville Road.

The City General Plan recognizes the need for additional bikeways to serve the urban area. The General Plan suggests that a comprehensive system of utilitarian bikeways linking residential neighborhoods with community facilities and places of work be considered.

Sacramento Regional Area Planning Commission

SRAPC has several routes proposed in this County and adjoining jurisdictions which have been adopted in concept by the Regional Planning Commission but not adopted as specific routes.

The Gold Rush Parkway Plan adopted by the Regional Planning Commission in 1972 indicates bicycle routes which follow the American River Parkway and Folsom Lake State Park.

Rancho Cordova

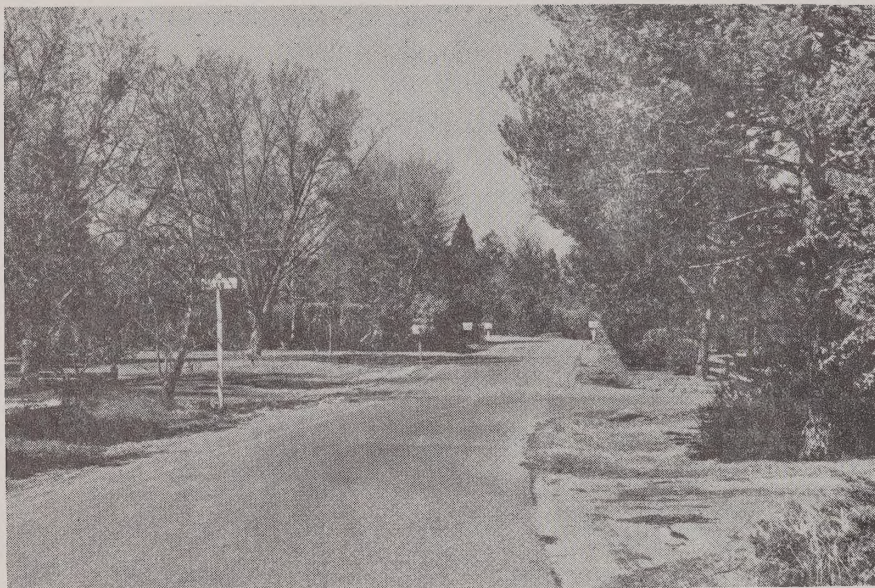
The Rancho Cordova Park District approved a bikeway plan in 1972 indicating a network of on-street bikeways serving the total community. The City-County Bikeway Master Plan recognizes the district's adopted routes.

Del Paso Park District (now Arcade Creek Park District)

The Del Paso Park District, on May 31, 1972 adopted a recreation plan for their district. The plan recommends a bikeway along Arcade Creek. This proposal coincides with the recommendations made in the County General Plan and a City Community Plan proposed for the area.

Southgate Recreation and Park District

The Southgate Park District has also approved a system of on and off-street bikeways for their district. Most of the district's adopted routes have been incorporated into this Master Plan.



Low traveled neighborhood streets
provide ideal conditions for bicycle
riding.

Chapter 10

RATIONALE AND SELECTION OF BIKEWAYS

The Bikeway Master Plan Map indicates two types of bike routes; off-street or Class I and on-street which can either be Class II or Class III depending on a number of factors.

It is not within the scope of this Master Plan to indicate which routes are to be developed as Class II or Class III. That determination has to be based on a large number of factors and should be made as a part of the implementation program to be carried out by the County and the City of Sacramento. However, the following discussion could assist in making such a determination.

Classification of on-Street Bikeways

Class II - Bike Lanes

Reasons for the establishment of Class II bike lanes include the following:

- a. A designated lane for bicycles tends to reassure the motorist. The motorist feels that bicycles become far more predictable when they are in a designated space.
- b. Bike lanes make inexperienced riders feel pyschologically safe.
- c. Bike lanes promote ridership by attracting the public's attention.
- d. The facility may increase the motorist's awareness of cyclists.
- e. Marked lanes represent an attempt to safely handle two different modes of transportation, the bicycle and the automobile. They exist for the orderly flow of traffic with slower vehicles on the right hand side of the road. The bike lanes are an attempt to orient the slow cyclist by reserving space for him or her on the road.

Class II bike lanes are recommended for those thoroughfares where a combination of traffic factors exist. These factors include motor vehicle traffic volume and speed, parking

density, pavement width, right-of-way availability, bicycle travel patterns, anticipated bicyclist volume, and travel time.

A keen relationship exists between route and generators. Arterial streets are generally laid out as the fastest and most direct way of going to where people wish to go (generators of travel). Cyclists wishing to quickly reach a destination will more likely use these streets. Therefore, bike lanes should be established on arterial and secondary arterial streets, where warranted, for a basic transportation network to connect residential areas with schools, businesses, government offices, industrial areas, shopping centers, recreation areas and other destinations.

Class III - Bike Routes

The Class III Bike Route is a suggested route whose purpose is orientation. It acts as basically a recommendation to the cyclist that the designated route is a desired alternative route. The Bike Route sign is designed not only to guide the bicyclists but also to alert the motorist that bicyclists are likely to be encountered along the route.

Class III bike routes are suggested on roads where the intensity of traffic and the nature of the street does not warrant the installation of Class II bike lanes. They should only be developed on routes with low speed, low volume roadways, such as residential streets. Since Class III bike routes consist merely of signing, it should be kept in mind that signing alone will not assure safety. There should be adequate width in the roadway to provide for operation of bicycles and motor vehicles. Class III routes are also recommended for long roadway segments usually in the rural areas designated for use by touring groups and other bicycling devotees.

Chapter 11

FUNDING AND COSTS

Available Funding

The Bicycle Lane Account, administered by Cal-Trans, reserves \$30,000 per month from gas taxes for bike lane construction along streets and roads of cities and counties. The City and County must provide funds for at least one-third of the project. State funds totaling not less than \$360,000 are available for nonmotorized transportation facilities related to the State Highway System. The funds come from the annual State Highway Budget.

The Federal-Aid Highway Act of 1973, Section 217 relates to Bicycle Transportation and Pedestrian Walk Ways by authorizing the use of Federal-Aid highway funds to construct bikeways on Federal-Aid highway projects. The funds are limited to \$2 million per year for each state.

The Federal Land and Water Conservation Fund sets aside money to be used for bicycle recreation trails. Local funding must match the Federal funds on a 50 - 50 basis.

Sacramento County also uses substantial amounts of Road Funds for on-street bike lanes. Revenue sharing has contributed to both Class I and II bikeways. In addition, SB 325 (sales tax) funds are available under certain conditions for bikeways.

The "State Beach, Park, Recreational and Historical Facilities Bond Act of 1974" allocated \$300,000 for the development of off-street multi-purpose trail projects identified in this Master Plan. An additional \$146,120 available from this Bond Act is earmarked for the development of a Class I bike trail extending north from the American River Parkway, along the Natomas East Main Drain, to the Carl Hansen Park site at the confluence of the Drain and Dry Creek.

Construction and Maintenance Costs

The purpose of this section is to provide supporting documentation for the estimated costs of the proposed county-wide off-street bikeway system described in this report.

There are numerous components that go into the construction of a bikeway network. The selected configuration for

a particular segment of the system depends not only on the type of bikeway; ie., path, lane, or route, but also on the availability of construction materials. Since the various combinations of components are numerous, it was decided that the best approach would be to develop unit costs expressed in linear terms. In this manner, local governmental agencies may select the construction alternative that is most acceptable and appropriate for individual condiditions.

1. Construction Costs

Bikeway construction cost estimates were determined by investigating numerous bikeway systems which have been built.

A composite of costs was attained by aggregating the many single items that go into the construction of the various types of bikeways. This method afforded a comparison of the many variables of minimum-maximum costs, designs, and requirements for differing geographical locations.

The tabulation which follows includes the estimated cost of bike paths, bike path barriers, bike lanes, and bike routes.

Sacramento Bikeway Construction Costs (Per Bikeway Mile Based
on 1974 Prices)

Table 3

It should be noted from Table 3 that a wide range of bike path costs exists. The cost of a specific bike path will depend, to a great extent, upon the selection of the type of surface desired.

<u>Class I Bike Paths</u>	<u>Cost Per Mile</u>
Portland cement concrete surface 8 feet wide, 3½ inch deep strip paving, including grading	\$40,000
Full-depth asphaltic concrete 8 feet wide, 4 inch depth with subgrade blading, soil treatment and compaction	20,000
Asphalt concrete surface, 8 feet wide, 4 inch aggregated base with 2 inch surface	15,000
Signing, striping, legends	2,000
Landscape barriers (irrigated hedge)	24,000
(not irrigated)	8,000
Barrier (chain link or rail fencing one side only)	27,000
<u>Class II Bike Lanes</u>	
Signing, striping, and legends	4,000
Grate modification	400
A.C. dike	8,000
<u>Class III Bike Routes</u>	
Signing	800
Grate Modification	300

Source: Sacramento County Highways and Bridges Division and
City of Sacramento Parks and Recreation Department.

a. Surface Construction Types

1) Asphalt-Concrete Bike Path

Costs for construction of an eight feet wide asphalt-concrete bike path were obtained for two different types of base and surface. These costs currently run approximately \$20,000 per mile for 4" asphalt concrete and \$15,000 per mile for a four inch aggregate base with a two inch asphalt concrete surfacing. The four inch full-depth asphaltic concrete pavement structure is recommended since it is easy to construct and durable, requiring minimum maintenance.

2) Concrete

Costs for construction of concrete pavement bike paths, eight feet wide, were obtained from the city on a recent contract at approximately \$40,000 per mile for 3½ inch thick strip paving. The 3½ inch thick concrete paving is considered desirable from a maintenance and durability standpoint.

b. Signing, Striping, and Legends

All two-way bike paths should have appropriate signing, striping, and pavement legends regardless of surface types chosen. For this reason, \$2,000 per mile should be added to the cost of each surface type before applying the per mile cost to the number of bike path miles anticipated for a local network.

Costs for signing, striping, and pavement legends were based on estimates made by the County Traffic Section. Criteria and standards for signing, striping and legends are minimums established by a combination of guidelines given by the California Traffic Control Devices Committee and the Sacramento County Traffic Engineer.

The current (1974) cost of striping and pavement legends for bikeways in Sacramento County follows:

Table 4

Signing, Striping and Pavement Legends

<u>Description</u>	<u>Cost Per Mile</u>
<u>Striping</u>	
6" solid single white line	\$200
4" solid single white line	130
<u>Legends</u>	
2 street messages per block @ \$25 each	500
<u>Signs</u>	
Urban	900
Rural	400

c. Drainage Grate Modification

Some storm drainage catch basin grates are built so that small tires of most modern bicycles can easily become entrapped. It is recommended that the catch basin grates be modified with horizontal strips to eliminate this hazard. The estimated average cost for these changes is \$15 each or \$300 per mile.

d. Bikeway Separation Fences or Barriers

Physical separations or barriers for bike paths will, in many instances, be required when located in close proximity to canal banks, cement-lined flood drainage channels, active waterways, or freeways. Rail fencing appears suitable for canal bank bike paths since it does not block the scenic view and can be removed and relocated easily. Hedges, trees, or native growth provide a desirable barrier along stream beds and is pleasing to the eye. Chain link fencing should provide a barrier when paths are located near freeways to prevent unintentional encroachment by either the bicyclist or motorist.

The cost of fencing for bike paths is approximately \$5 per linear foot or \$27,000 per mile for six foot high rail or chain link fencing. Landscape barriers for a bike path are estimated to cost \$4.50 per linear foot with irrigation

systems (\$24,000 per mile) or \$1.50 per linear foot without irrigation (\$8,000 per mile).

e. Structures

For purposes of this study, current estimated structures costs are:

Bridge 12 feet wide	\$300 per linear foot
Large Culverts	\$350 per linear foot

f. Cost Application

It should be noted that all of these cost estimates exclude the acquisition of bikeway rights-of-way. The cost of right-of-way acquisition varies over such a wide spectrum that projected estimates would be meaningless. It should be noted that these costs are based upon current prices. While the cost of construction is likely to increase in the future, past trends have indicated that these increases will be proportionately the same regardless of the bikeway configuration chosen. Therefore, the relative cost of the bikeways should remain constant.

For purposes of uniform cost estimating of off-street facilities the following will be used for clearing, grading, and paving:

1. Difficult	\$60,000 per mile
2. Average	30,000 per mile
3. Simple	15,000 per mile
Fencing	\$5 per linear foot

2. Maintenance Costs

In order to have an effective bikeway program, it will be necessary to provide adequate maintenance of the bikeways.

The expense related to surface type is the only difference which can be found in the maintenance costs of bike paths. The current estimated annual cost per mile for maintenance by surface type is as follows:

Portland Cement/Concrete	\$100 per year per mile
Full-depth Asphaltic/Concrete	200 per year per mile
Surface Asphalt/Concrete	250 per year per mile

Table 5

Estimated Annual Maintenance Costs
Per Mile by Bikeway Type

Bike Paths

<u>Component</u>	<u>Estimated Cost</u>	<u>Remarks</u>
Barriers	\$ 200.00	5%/yr. chain link or rail 5 yr. life span (20%)
Signs	100.00	15% vandalism
Striping-single line	100.00	Life span 2 yrs. (50%)
Stencils	80.00	Life span 2 yrs. (50%)
Sweeping	180.00	Operator & equipment @ \$15/hr.
Litter cleanup	100.00	\$5 hr.
Drainage & Landscaping	150.00	
AC Pavement	200.00	Op'tr. & Equip. @ \$15/hr.
Total	\$1,060.00	

Bike Lanes

Signs	200.00	20% depreciation 15% vandalism 10% other causes
Striping-single line	100.00	Life span 2 yr. (50%)
Legends	250.00	Life span 2 yrs. (50%)
Sweeping	250.00	
AC pavement	200.00	
Total	\$950.00	

Bike Routes

Signs	200.00	20% depreciation 15% vandalism 10% other causes
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Sources: Sacramento County Traffic Section
Sacramento County Parks and Recreation Department

The 3½ inch concrete/strip paving on a bladed base is virtually maintenance free for approximately ten years under normal usage and conditions. However, when repairs are required, they are more expensive.

An asphalt 4-inch full-depth pavement structure with bladed, soil treated and compacted subgrade, requires only "slurry" seal maintenance about every five years. This surface does not require an aggregate base and is inexpensive to repair. The "deep-lift" technique can be used to place the full 4-inch asphalt layer with one pass of the paver.

The 4-inch aggregate base with 2-inch asphalt-concrete surface, under normal usage and with proper drainage, requires only minor shoulder grading for the first ten years. It is comparatively inexpensive to repair. A "slurry" or "fog" seal is normally the only maintenance required.

Bike paths and bike lanes must be swept as often as necessary to maintain a clean riding surface. The exact frequency can only be determined by observation and experience. Factors such as adjacent trees, type of truck traffic, and proximity of a bike path to a roadway must be taken into consideration. Broken glass is the number one enemy of the cyclist's tires, followed closely by gravel. Sand, silt, and leaves can also be very hazardous.

It is strongly recommended that Sacramento County and the City of Sacramento develop an on-going program of on and off-street bikeway maintenance. This program may require the acquisition of some equipment and an adequate allocation of personnel to do the job.

Chapter 12

IMPLEMENTATION PROGRAM

The Bikeway Plan map indicates two types of bikeways; on-street and off-street.

On-Street Bikeways or Class II and III amount to a total of 680.7 miles, 446.9 miles of which are in the unincorporated area of Sacramento County, 170.1 miles are in the City of Sacramento and 75 miles are located within the right-of-way of State controlled highways. Approximately 158 miles of bikeways or about 23% of the total have been developed and are now being used. (See Table 6). The remaining portion is proposed to be developed in four phases as suggested in Appendix B of this report.

Specific routes for on-street bikeways are also suggested for the cities of Folsom and Galt. These bikeways fall within the jurisdiction of those cities and are therefore under the direction of their governing bodies. Those routes are included in the Plan for overall continuity of the bikeway system.

Off-Street Bike trails or Class I are recommended throughout the City and County of Sacramento, with more emphasis in the urban areas.

There are 192.2 miles of bicycle trails shown on the Plan map, 124.6 miles of which fall within the unincorporated area of the County and 67.6 miles are located within the City of Sacramento.

Of the total 192.2 miles of the bicycle trails shown, 35.8 miles or 18% of the total have already been developed and are now being used. (See Table 7).

Table 6

Miles of On-Street Bikeways

Proposed Phases	County of Sacramento	City of Sacramento	State of California	TOTAL
Phase I	77.6	99.6		177.2
Phase II	78.7	35.1		113.8
Phase III	77.8	4.5		82.3
Phase IV	50.5	22.9		73.4
No Phase	--	--	75.0	75.0
Subtotal	284.6	162.1	75.0	521.7
Existing	151.0	8.0	--	159.0
TOTAL	435.6	170.1	75.0	680.7

Recommended Development Priorities

Phase I - High Priority Projects

These projects consist of routes which the Task Force has identified due to their location, recreation and safety potential, and relationship with existing trails. These routes constitute worthy projects which the Task Force believes should be developed with monies allocated for off-street bikeways in the "State Beach, Park, Recreational and Historical Facilities Bond Act of 1974".

Arden Bar Bicycle Trail

Extends eastward the existing bike trail from Rio Americano High School on the north side of the American River to the site of a proposed bicycle bridge. Also extends westward the existing trail in Goethe Park to the site of the same proposed bridge.

Implementing Agency - Sacramento County
Recommended Funding.....\$102,500.00

Sacramento Bar Bicycle Trail

The trail will extend from Bannister Park in Fair Oaks along Minnesota Creek to Sacramento Bar. It will then cross the American River via a low bridge and connect to the existing American River Bikeway at Lower Sunrise Park.

Implementing Agency - Sacramento County
Recommended Funding.....\$ 43,700.00

Folsom Boulevard-American River

The route will begin on-street at Folsom Boulevard on Citrus Road to the freeway overcrossing where it goes under the freeway alongside the Southern Pacific Railroad, then returns to the paved street and continues to Coloma Road. The off-street trail will start at the north side of Coloma Road following a drainage canal to a break where it will follow a maintenance road to a marked crossing of the Southern Pacific Railroad. The trail continues either onto a road leading to the Fair Oaks Bridge and the bikeway, or back onto the drainage road parallel to Sunrise Boulevard, under the Sunrise Bridge and onto the American River Bike Trail.

Implementing Agency - Sacramento County
Recommended Funding.....\$103,800.00

City of Sacramento

The Task Force recommends that \$50,000 dollars be allocated to the City of Sacramento to be used in the development of an off-street bikeway facility within the City of Sacramento and in conformance with this Bikeways Master Plan.

Implementing Agency - City of Sacramento

Recommended Funding.....\$50,000.00

Natomas East Main Drainage Canal

This project has been approved by the Board of Supervisors and is described as a County-wide project. The trail will be parallel to the east side of the East Natomas Drain, extending northward from the American River Parkway to the Carl Hansen Park site at the confluence of the Drain and Dry Creek.

Implementing Agency - Sacramento County

Morrison Creek and Florin Creek

The trail along the channelized portion of Morrison Creek will extend from Riza Avenue, under Highway 99, across Florin Road to Franklin Boulevard. The Florin Creek trail will extend from Palmer House Drive near Rutter Junior High School, across Stockton Boulevard, under Highway 99 to the Sacramento City Limits.

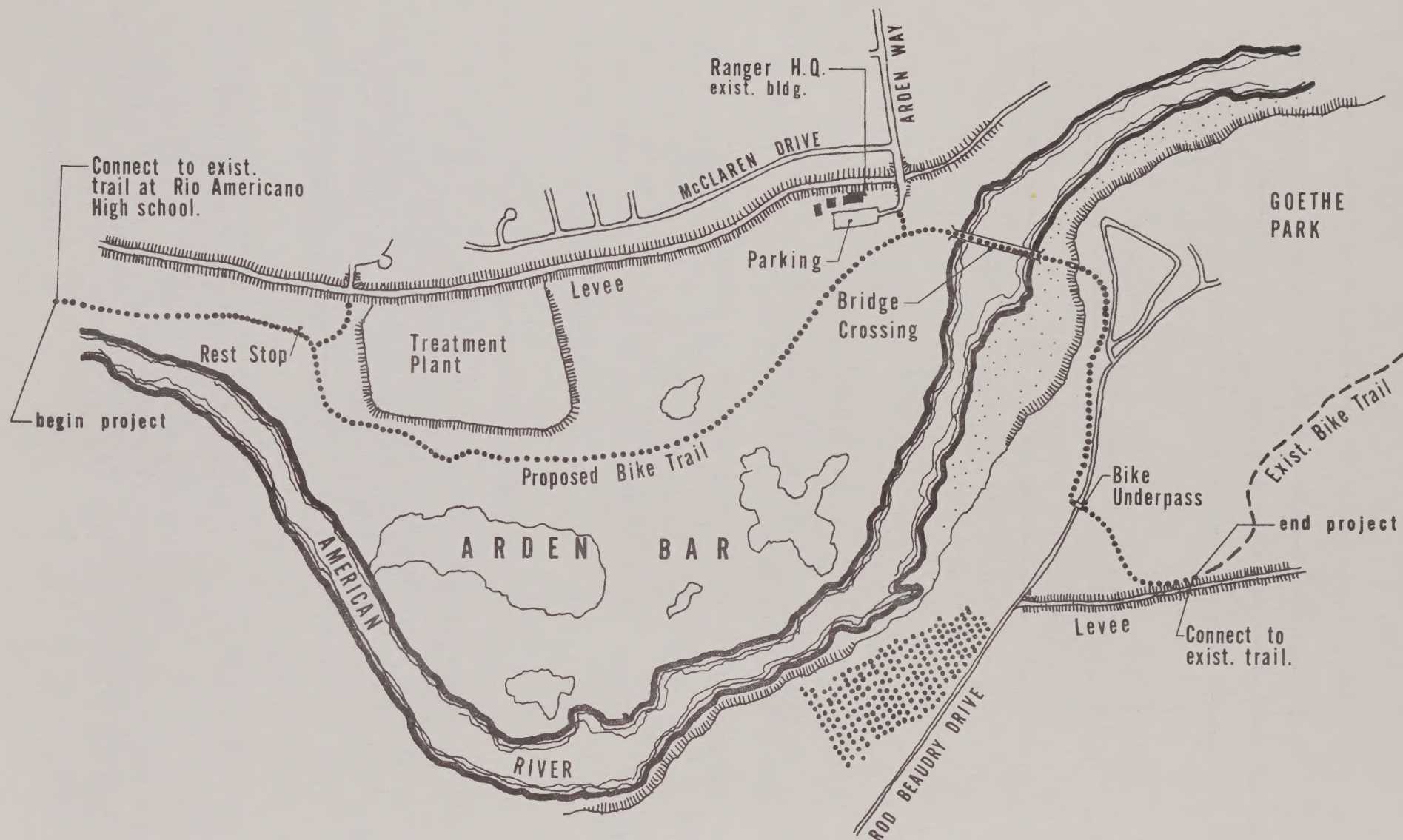
Both of these projects are to be financed with the Board monies allocated to the Southgate Recreation and Park District.

Implementing Agency - Southgate Recreation and Park District.

Table 7

Miles of Off-Street Bikeways

Proposed Phases	County of Sacramento	City of Sacramento	TOTAL
Phase I	15.3	--	15.3
PHase II	83.8	--	83.8
No Phase	--	57.3	57.3
Subtotal	99.1	57.3	156.4
Existing	25.5	10.3	35.8
TOTAL	124.6	67.6	192.2



ARDEN BAR

Bicycle Staging & Parking

Begin project

BANNISTER PARK

BANNISTER RD

FAIR OAKS RIVER

COMMUNITY OF
FAIR OAKS

AVE

PENNSYLVANIA

RIVER DR

Low Bridge

end project

LOWER SUNRISE

Existing Bike Trail

Proposed Bike Trail

Rest Stop

Wood Bridge Crossing

Minnesota

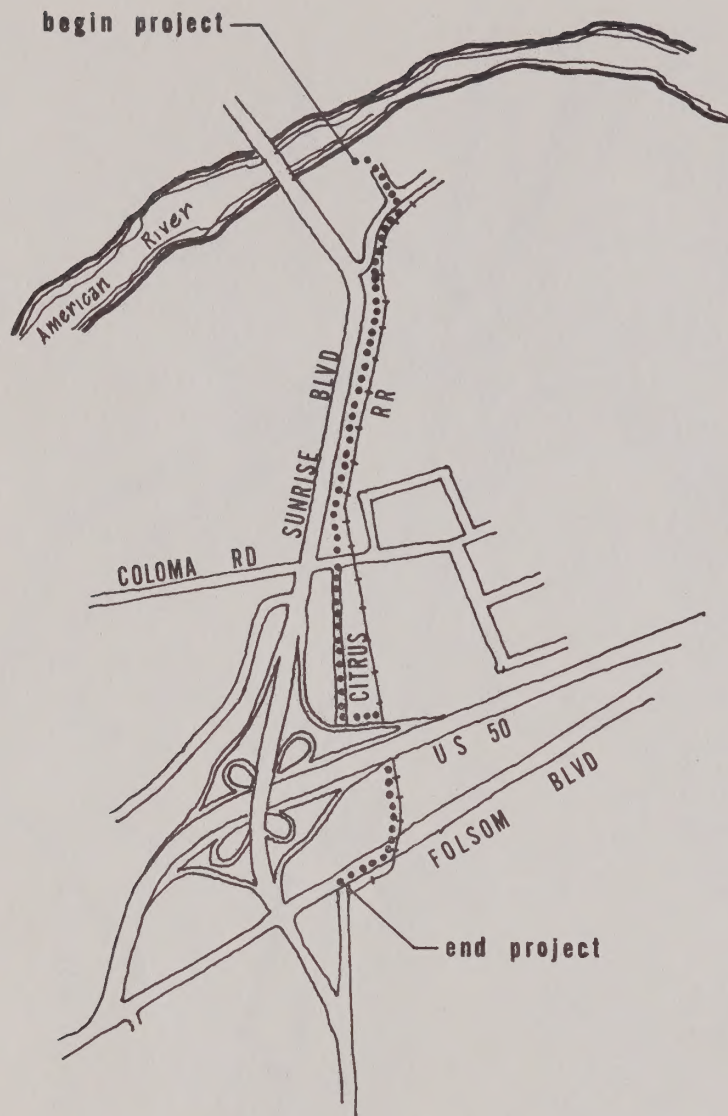
SACRAMENTO BAR

AMERICAN RIVER

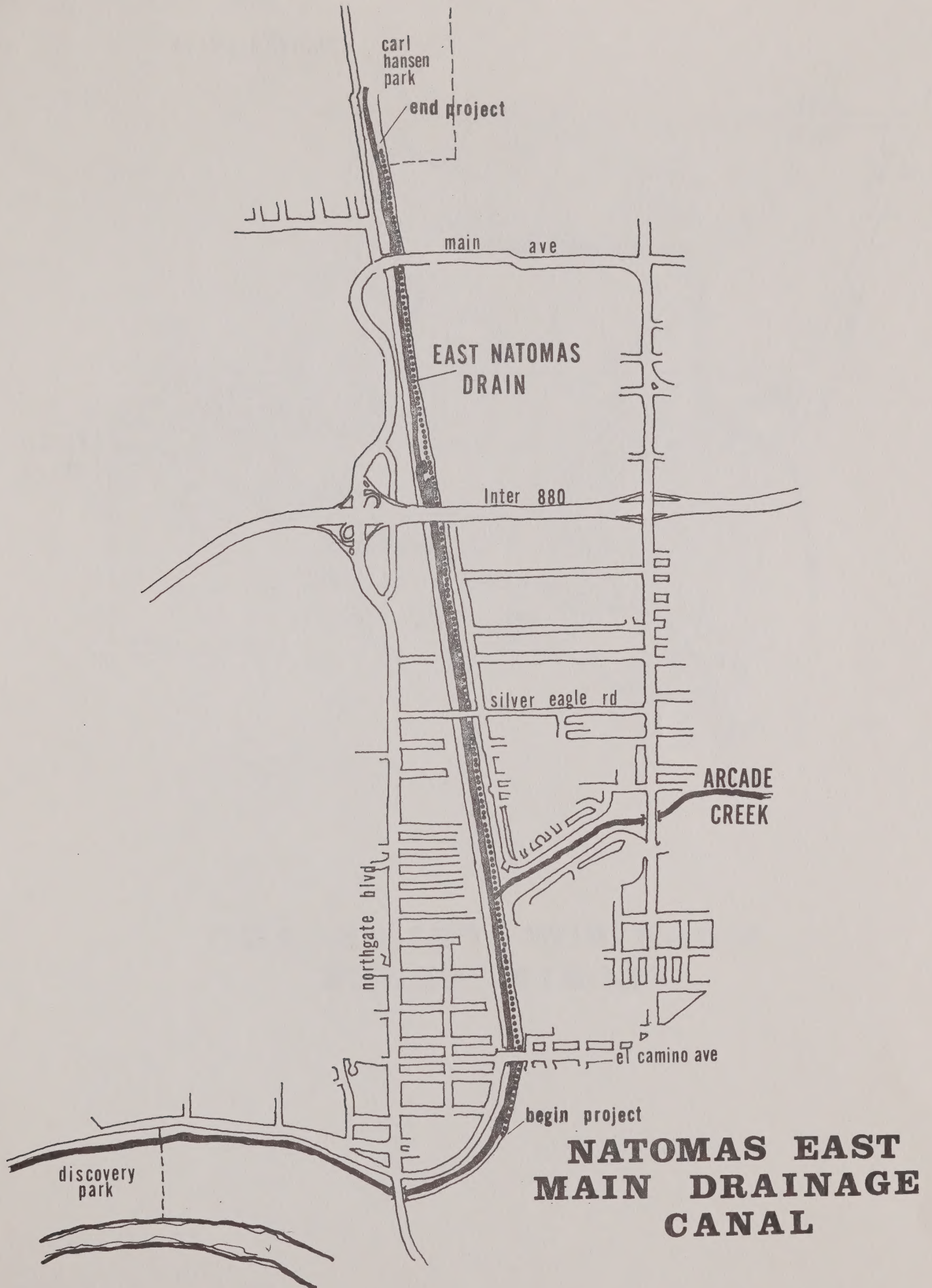
Creek

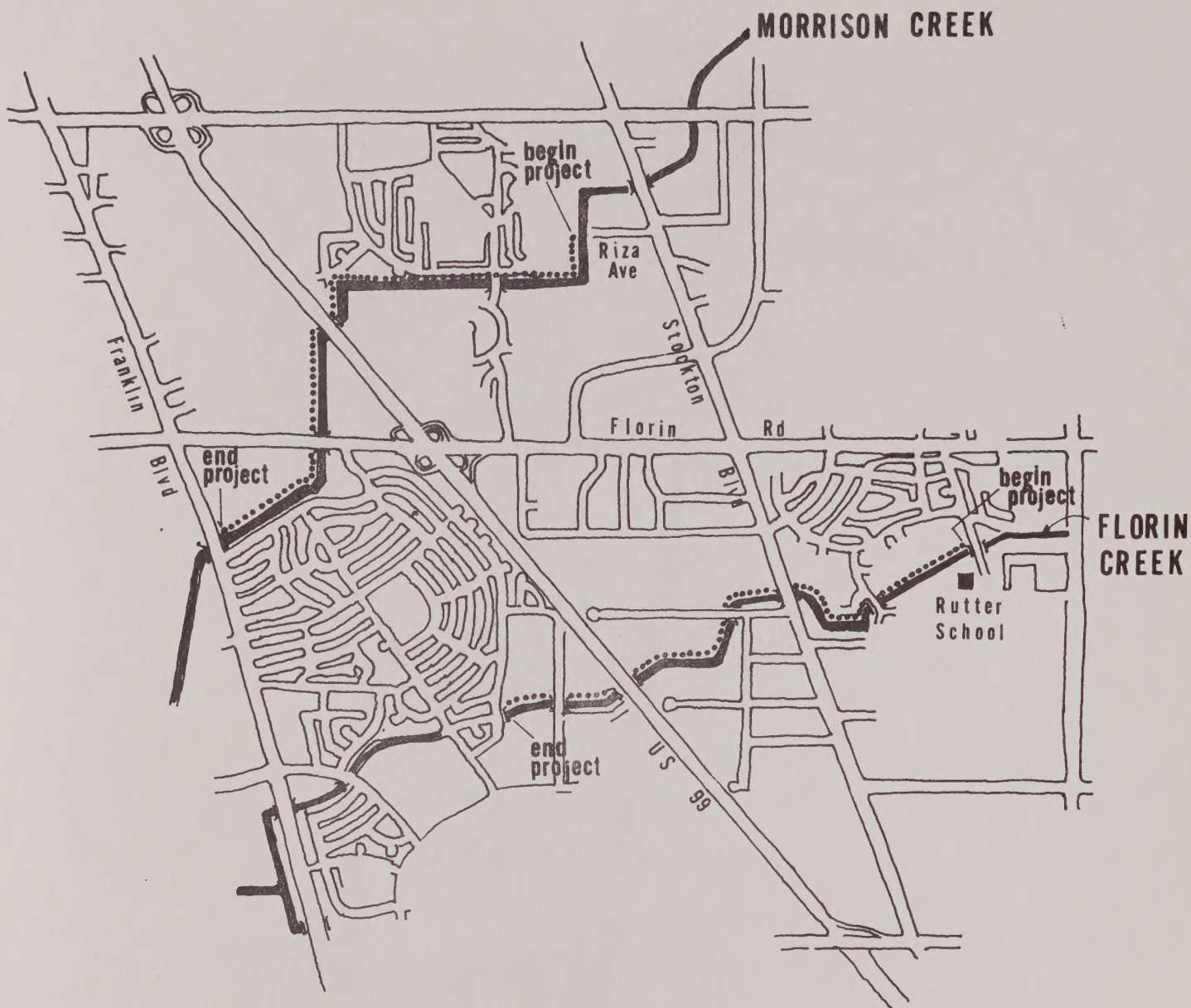
73

SACRAMENTO BAR PROPOSED BICYCLE TRAIL



FOLSOM BOULEVARD - AMERICAN RIVER





MORRISON CREEK AND FLORIN CREEK

APPENDIX A
BICYCLE SAFETY
EDUCATION AND ENFORCEMENT PROGRAMS

California Highway Patrol

The California Highway Patrol Bicycle Enforcement Manual outlines the combined enforcement/education program designed and used by the Department and other law enforcement agencies statewide. It can provide a uniform bicycle enforcement and education program adaptable for use by all law enforcement agencies.

Policies, guidelines, procedures and responsibilities are provided which are designed to promote the safe operation of bicycles and to prevent injury or loss of life.

The stated objective of the program is to obtain voluntary compliance with the law, promote uniformity in the application of enforcement, involve parents in the process of educating their children in safe riding habits, and to provide a means for locating and prosecuting repetitive violators.

The program provides a document which can be used for written enforcement action against the young bicyclist, as well as adult violators. Processing of the document includes a provision for mail follow-up to involve the parent in the enforcement/education process for young violators. It eliminates the necessity of requiring a child to appear in court when a "Notice to Appear" is issued.

Sacramento Police Department

The Police Department has a pamphlet on Bicycle Safety Hints available for distribution to schools. The pamphlet is written for children and includes sections on the laws, registration, a maintenance check sheet, and security against theft.

Sacramento County Sheriff's Office

The Sheriff's Office also has pamphlets on bicycle safety available for public distribution. The pamphlets include sections on safety hints, the laws, and a check list for maintenance of bicycle parts.

Sacramento Safety Council

The Sacramento Safety Council is involved in the following bicycle safety education services:

1. Distribute the Bicycle Institute of America kit - which includes instruction in the operation, inspection and general use of bicycles.
2. Provide Walt Disney study prints and films to California Highway Patrol and Police Department for presentation to community.
3. Assist Kiwanis, Parent Teachers Associations, Soroptimist Club, Pilot Club, Junior Women's Federation and other community groups with Bicycle Safety Rodeos. Provide materials and guidance.
4. Research for one year the elements which help form the basis for the curriculum of the National Safety Council's "All About Bikes" unified self-contained teaching unit.
5. Work with local television stations to provide bicycle theft guidance via a slide series furnished by a grant from private industry.

APPENDIX B

LIST OF ON-STREET BIKEWAYS GROUPED BY PHASES

Sacramento County - Unincorporated Area

Note: This list does not include State Highways.

PHASE ONE:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
23rd Avenue	Sacramento Blvd. to 44th Street	0.5
44th Street	City Limits to 23rd	0.6
Perry Avenue	44th Street to Stockton Blvd.	0.7
41st Ave.-LemonHill	Sacramento Blvd.to Stockton Blvd.	1.5
47th Avenue	Railroad to Sacramento Blvd.	0.6
Sampson-Steiner	Lemon Hill to 53rd Avenue	1.2
N & 6th Parkway-		
55th Street	53rd Avenue to 66th Avenue	0.8
66th Avenue	55th Street to Stockton Blvd.	0.8
65th-53rd-Lawnwood	Stockton Blvd.to 75th Street	1.0
Briggs Drive	Lawnwood to Florin Road	0.7
Florin Road	Stockton Blvd.to Power Inn Rd.	1.0
Lindale Drive	Stockton Blvd.to Palmer House	0.6
Power Inn Road	Elsie Avenue to City Limits	1.8
Elsie Avenue	City Limits to Power Inn	0.7
Gerber Road	Stockton Blvd. to Elk Grove-Florin	2.7
Munroe St.-Fulton	American River Dr.to Northrop Ave.	0.8
La Riviera Dr.	Watt Avenue to Folsom Blvd.	1.5
Salmon Falls Dr.	La Riviera to Manlove	0.4
Manlove Road	Folsom Blvd.to Salmon Falls Dr.	0.3
Mather Field Rd.	Folsom Blvd.to Mather AFB	1.0
McGregor Dr.	Ambassador Dr. to Folsom Blvd.	1.4
Rio Linda Blvd.	Elkhorn Blvd. to Elverta	2.3
Dry Creek Road	Elkhorn to Q Street	1.0
Walerga Road	Elkhorn Blvd. to U Street	0.7
Madison Avenue	Watt Avenue to Hillsdale Blvd.	1.3
Airbase Drive	Madison to Watt	0.2
Morse Avenue	Marconi Avenue to Edison	0.9
Montclair Street	Marconi Avenue to Edison	1.2
Hemlock Avenue	Myrtle to Auburn	0.8
Myrtle Avenue	Auburn Blvd. to Hemlock	0.5
Main Avenue	Sunset Avenue to Oak	3.3
Sunset Avenue	Hazel Avenue to Main	1.2
Hurley Way	Bell to Morse	1.1
Northrop Avenue	Bell to American River Bike Trail	0.4
Auburn Blvd.	Watt to Winding Way	0.9
River Road	Paintersville to Isleton	15.2
Walnut Grove-		
Thornton	River Road to Cut Line	1.2
Garden Highway	I H 5 to Sutter County	15.9
San Juan Road	Garden Highway to El Centro	1.0
El Centro	Garden Highway to San Juan	1.8
Orchard Lane	Garden Highway to El Camino	0.4
Oak Avenue	Hazel Avenue to Folsom-Auburn Rd.	3.4
Don Julio	Watt to Elkhorn	2.3
Phase One Development -- Total		77.6

PHASE TWO:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
A & East Parkway	Franklin Blvd.to Center Parkway	1.5
Franklin Blvd.	A Parkway to City Limits	0.4
16th Street	Q Street to Elverta Road	1.2
Elverta Road	Rio Linda Blvd.to Gibson Ranch	3.1
Q Street	Rio Linda Blvd. to 16th St.	1.6
M & O Streets	Rio Linda Blvd.to Dry Creek Road	1.2
Don Julio Blvd.	Elkhorn & U Street	0.7
Diablo Drive	Elkhorn Blvd.to Antelope Road	1.9
U Street	Watt Avenue to Antelope Road	2.7
Antelope Road	U Street to Van Maren Lane	1.7
Ethan Way	Hurley Way to El Camino Ave.	1.6
El Camino Avenue	Ethan Way to Bell	0.6
Madison Avenue	College Oak to Sunrise Blvd.	4.5
Whitney Avenue	Montclair to Sue Pam Drive	2.6
Grant Avenue	Sue Pam Drive to Hollister	1.8
Hollister	Grant Avenue to Fair Oaks Blvd.	0.5
Fair Oaks Blvd.	Hollister to Sunrise	1.8
Auburn Blvd.	Old Auburn Road to Twin Oaks Ave.	1.7
Bannister	Fair Oaks Blvd.to Park	0.3
Sunrise Blvd.	Antelope Road to Placer County	0.8
Pennsylvania Ave.	Fair Oaks Blvd.to Park	0.4
Fair Oaks Blvd.	Winding Way to Madison	1.4
Kenneth Ave.	Winding Way to Old Auburn Road	5.2
Illinois Avenue	Winding Way to Park	0.1
Twin Oaks Ave.	Auburn Blvd.to Sunrise Blvd.	1.0
Central Avenue	Kenneth to Main	2.4
Winding Way	San Juan to Sunrise	1.1
El Camino	Eastern Avenue to California	2.4
Alta Arden	Bell to Morse	1.1
Grant Line Road	Stockton Blvd. to Cut	11.9
Manlove Road	Kiefer to Jackson Highway	0.6
Elk Grove-Florin	Jackson Highway to Stockton Blvd.	9.9
Elk Grove-Florin	Bond to Stockton Blvd.	2.2
French Road	Gerber Road to City Limits	1.3
Florin Road	French to Elk Grove-Florin	1.0
Alta Arden	Ethan to Bell	0.5
Watt Avenue	Edison to Elkhorn Blvd.	4.0
Phase Two Development -- Total		78.7

PHASE THREE:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Mayhew Road	Folsom Blvd. to Kiefer Blvd.	1.5
White Rock Road	S.White Rock to Sunrise Blvd.	1.8
Antelope Road	U Street to Placer County	1.6
Jan-Crestview-		
Schuyler	Lincoln Ave.to Madison	1.8
Marshall	Stanley to Grant	0.5
Stanley	California to Marshall	0.6
Palm Avenue	California to Hoffman Park	0.8
Chicago Avenue	Winding Way to Madison	1.3
Hazel Avenue	Oak Ave. to Placer County	1.2
Folsom Auburn Rd.	Folsom Dam Rd.to Placer County	0.6
Old Auburn Rd.	Sunrise Blvd.to Placer County	1.9
Rollingwood Blvd.	Antelope Road to Auburn Blvd.	1.0
Coyle Avenue	Manzanita to Dewey	1.1
Pershing Avenue	Kenneth Ave.to Madison Ave.	2.2
Palm Avenue	California to Hoffman Park	0.8
Placerville Road	Folsom City to White Rock Rd.	5.5
White Rock Rd.	Scott Road to Placerville Road	1.9
Scott Road	White Rock to Cut	0.9
Excelsior Road	Jackson Highway North	1.7
Elk Grove Blvd.	Franklin to Grant Line Road	6.9
Wilton Road	Grant Line to Cosumnes River	1.6
Scott Road	Cut to Jackson Highway	8.4
Green Rd.-Dillard	Cut to Jackson Highway	10.4
Clay Station Rd.	Twin Cities to Dillard	8.0
Linda Rio-Mira Del		
Rio	La Riviera to Goethe Park Rd.	2.7
Garfield Avenue	Fair Oaks Blvd.to Elkhorn Blvd.	5.6
Green Valley Rd.	Folsom to El Dorado County	1.8
Blue Ravine Road	Folsom to Green Valley Road	0.5
Fair Oaks Blvd.	Fulton to Arden Way	<u>3.2</u>
Phase Three Development-Total		77.8

PHASE FOUR:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Palmer House Dr. (incomplete)	Florin Road to Gerber Road	1.1
Loucrete Dr. (incomplete)	Palmer House to Power Inn	0.3
Stevenson Ave.	Stockton Blvd.to Power Inn	0.2
Watt Avenue	Elverta Road to Placer County	1.0
Woodside Drive (incomplete)	Auburn Blvd.to Sylvan Road	1.1
Circuit-Sayonara	San Juan to Sunrise Blvd.	1.2
Larwin-Woodmore- Central	Sunrise to Kenneth	2.1
Franklin Blvd.	City Limits to Cut	5.5
Twin Cities Road	River Road to U.S. 99	12.6
Hood Franklin Road	River Road to Franklin Blvd.	3.8
Franklin Blvd.	Cut to San Joaquin County	8.9
Christensen Road	Twin Cities to New Hope Road	3.0
New Hope Road- Boessow Road	Christensen to Cherokee	3.2
Cherokee Lane	Boessow to Twin Cities	2.6
Sacramento Road	New Hope Rd.to San Joaquin County	0.9
Winding Way	Sunrise Blvd. to Hazel	<u>3.0</u>
Phase Four Development - Total		50.5

LIST OF ON-STREET BIKEWAYS GROUPED BY PHASES

City of Sacramento

Note: This list does not include State Highways.

PHASE ONE:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Calvine Rd. Ext.	Center Parkway to Bruceville Rd.	.4
Meadowview Road		2.2
Valley Hi Dr.	Monaghan to Mack Rd.	1.2
Valley Green Drive	Valley Hi Dr.to Center Parkway	.3
Grandstaff Drive	Center Parkway to End	.7
Center Parkway	Pomegrante Ave.to Calvine Rd.Ext.	4.8
Detroit Blvd.	Deerhaven to Meadowview Dr.	.9
24th Street	Laramore Wy.to 68th Ave.	1.3
19th Street	Danvers to Meadowview Dr.	.2
Amherst St.	Janrick Ave.to Florin Rd.	1.4
Alma Vista	Branwood Wy. to Meadowview	.4
Branwood Wy.	Golden Oak to Alma Vista	.1
21st Street	Meadowview Rd.to 57th Ave.	1.2
South Land Park Dr.	I-5 to Junction with 14th St.	1.3
South Land Park Dr.	Junction with 14th St.to Nevis Ct.	1.8
Nevis Court	S.Land Park Dr.to Del Rio Rd.	.1
Del Rio Road	Nevis Ct. to Normandy	.4
57th Avenue	21st St. to Hogan Drive	.2
56th Avenue	Golf View Dr.to Hogan Drive	.2
Hogan Drive	57th Ave.to 24th St.	1.1
68th Avenue	Amherst St. to 24th St.	1.3
Gardendale	24th St. to 29th St.	.3
35th Avenue	Riverside Blvd.to Freeport Blvd.	1.4
34th Avenue	Norman Way to 24th St.	.2
Wentworth Avenue	Del Rio Rd.to Freeport Blvd.	.4
Sheilah Way	Freeport Blvd.to Joaquin Way	.2
Harte Way	Joaquin Way to Irvin Way	.2
Irvin Way	Harte Way to 24th Street	.4
24th Street	68th Ave. to 22nd Avenue	5.8
Del Rio Road	Alta Dr. to Sutterville Road	.5
21st Avenue	Arlington Ave. to U.S. 99	.4
Arlington Ave.	21st Ave.to Wilmington Ave.	.3
East Pacific Ave.	Wilmington Ave.to Sutterville Rd.	.2
21st Street	20th Ave.to Sutterville Rd.	.2
20th Avenue	21st St. to 23rd St.	.2
23rd Street	20th Ave. to 22nd Ave.	.1
22nd Avenue	23rd St. to 24th St.	.2
Sutterville Road	21st St.to East Pacific Ave.	.6
13th Avenue	S.Land Park Dr.to Freeport Blvd.	.4
S.Land Park Dr.	13th Ave. to 2nd Ave.	1.0
Sub-total		34.5

PHASE ONE: (Continued)

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Vallejo Way	5th St. to 17th St.	1.0
17th Street	McClatchy H.S. to Vallejo Way	.2
5th Street	Vallejo Wy.to V Street	.7
Donner Way	24th St.to Franklin Blvd.	.4
Franklin Blvd.	Donner Way to 5th Ave.	.1
5th Avenue	Franklin Blvd. to 33rd St.	.2
2nd Avenue	Riverside Blvd.to 33rd St.	.7
24th Street	Donner Way to V St.	1.0
Front Street	Miller Park to K St.	1.3
Broadway	Front St. to 5th Street	.3
3rd Street	V Street to Broadway	.7
V Street	3rd Street to 28th Street	1.7
T Street	28th Street to 34th Street	.4
S Street	28th Street to 34th Street	.4
N Street	Front St. to 9th Street	.7
11th Street	V Street to Capitol Park	.6
K Street	14th Street to Alhambra Blvd.	1.3
D Street	8th Street to 28th Street	1.5
L Street	Alhambra Blvd. to 35th St.	.4
F Street	28th St. to Alhambra Blvd.	.2
E Street	28th St. to Alhambra Blvd.	.2
McKinley Blvd.	Alhambra Blvd. to 33rd St.	.2
Riza Ave/Stockton Boulevard		.3
Sun River Drive	53rd Avenue to Somis Way	.4
Somis Way	Sun River Drive to Elder Creek Rd.	.2
Logan Street	Lemon Hill Ave.to Elder Creek Rd.	.3
Lemon Hill Ave.	City Limits to Logan St.	1.4
Wilkinson St.- 38th Ave.	Lemon Hill Ave.to Wallace Ave.	.3
Wallace Ave.	38th Ave.to Fruitridge Road	.4
Ortega Street- McMahon Drive	Jr.High School to 62nd St.	.2
62nd Street	McMahon Drive to 21st Street	.9
21st Avenue	U.S. 99 to Sacramento Blvd.	.4
34th Street	21st Avenue to 12th Avenue	.5
Sacramento Blvd.	Fruitridge Road to 14th Ave.	1.0
12th Ave/14th Ave.	Sacramento Blvd. to 33rd St.	.4
21st Street	46th Street to 79th Street	6.3
3rd Avenue	33rd Street to 37th Street	.8
2nd Avenue	37th Street to 43rd Street	.5
43rd Street	14th Avenue to 2nd Avenue	.8
58th Street	21st Ave. to 11th Ave.	.7
Lowell Street	Fruitridge Rd. to Vandenberg Dr.	.2
Sub-Total		30.2

PHASE ONE: (Continued)

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Vandenberg Drive		.2
73rd Street	Vandenberg Dr. to 14th Ave.	.8
Power Inn Road	21st Avenue to Highway 16	1.1
Highway 16	Hornet Drive to Power Inn Road	.4
Hornet Drive		.3
11th Avenue	56th St. to 64th St.	.5
59th Street	Broadway to Folsom Blvd.	.7
60th Street	8th Avenue to Broadway	.3
61st Street	11th Avenue to 8th Avenue	.2
33rd Street	12th Avenue to 5th Avenue	.5
34th Street	5th Avenue to Folsom Blvd.	1.2
33rd Street	Folsom Blvd. to McKinley Park	.5
T Street	34th Street to 59th Street	1.8
39th Street	T Street to M Street	.6
51st Street	T Street to M Street	.6
M Street	35th Street to 58th Street	1.7
J Street	55th Street to Jed Smith Drive	.4
55th Street	J Street to F Street	.5
56th Street	J Street to F Street	.5
Elvas Avenue	McKinley Blvd. to F Street	2.0
Jed Smith Drive	College Town Drive to J Street	1.0
College Town Drive	Jed Smith Drive to Howe Ave.	.5
La Riviera Dr.	College Town Drive to Watt Ave.	1.7
Notre Dame Drive	Highway 16 to Lake Forest Drive	.4
Lake Forest Drive	Notre Dame Drive to Occidental Dr.	.2
Occidental Drive	Lake Forest Dr. to La Riviera Dr.	.5
University Ave.	Howe Ave. to American River Dr.	.5
American River Dr.	University Ave. to City Limits	.2
Jibboom Bridge		.2
W.El Camino Ave.	Reiner Way to Northgate Blvd.	.8
Northgate Blvd.	W.P.R.R. to Wilson Ave.	1.2
East Levee Road	Northgate Blvd. to W.El Camino Ave.	.7
W.El Camino Ave.	East Levee Rd. to Santiago Ave.	.2
Santiago Ave.	W.El Camino to Grove Ave.	.4
Grove Ave.	Santiago Ave. to Lampasas Ave.	.2
Lampasas Avenue	Grove Ave. to Norwood Ave.	.1
Norwood Avenue	Lampasas Ave. to Carroll Ave.	.9
Carroll Avenue	Norwood Avenue to Altos Avenue	.5
Altos Avenue	Carroll Avenue to Grand Avenue	.9
Grand Avenue	Altos Avenue to Pinnell St.	1.5
Canterbury Road	Slobe Ave. to Southgate Road	.3
Southgate Road	Canterbury Rd. to Royal Oaks Dr.	.5
Royal Oaks Dr.-		
Beaumont St.	Southgate Rd. to Dixieanne Ave.	.4
Dixieanne Ave.	Beaumont St. to Lexington St.	.4
Lexington St.	Dixieanne Ave. to Eleanor Ave.	.5
Sub-total		29.5

PHASE ONE: (Continued)

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Branch Street	Eleanor Avenue to Arcade Blvd.	.6
Arcade Blvd.	Branch St. to Del Paso Blvd.	.9
Del Paso Blvd.	Arcade Blvd.to Craigmont St.	.3
Hudson Way-		
Verano Street	Craigmont St. to Del Paso Blvd.	.4
Dayton Street	Del Paso Blvd.to Pinell St.	.2
Pinell Street	South Avenue to Bell Avenue	1.0
Bell Avenue	Norwood Avenue to Pinell St.	<u>2.0</u>
	Sub-total	5.4
	Phase One Development - Total	99.6

PHASE TWO:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Main Avenue	W.City Limits to Rio Linda Blvd.	1.5
Rio Linda Blvd.	Grand Ave. to Main Ave.	1.3
Northgate Blvd.	Wilson Ave. to I-880 Interchange	1.8
Eleanor Ave.	Park to Branch St.	1.0
Jibboom St.	Richards Blvd. to Bridge	.1
Richards Blvd.	Jibboom St. to Dos Rios St.	1.1
10th Street	Richards Blvd. to Levee	.4
Vine Street	10th St.to Dos Rios St.	.2
12th Street-		
Dos Rios Street	D Street to Vine Street	.8
North B Street	Dos Rios to R.R. Spur	.5
North 16th St.	D Street to North B Street	.3
20th Street	V Street to D Street	1.8
J Street	56th St. to Jed Smith Drive	.3
Riverside Blvd.	2nd Ave. to V Street	.5
24th Street	Broadway to V Street	.2
Highway 16	Power Inn Rd.to Notre Dame Drive	.5
24th St.-19th Ave.	22nd Ave. to Arlington Ave.	.3
Sutterville Rd.	Del Rio Rd.to Freeport Blvd.	.6
20th Avenue	Freeport Blvd. to 21st St.	.3
22nd Avenue	Freeport Blvd. to 23rd St.	.4
Fruitridge Rd.	Wallace Ave.to Perkins Road	1.3
Gloria Drive	Riverside Blvd.to Florin Rd.	.5
Havenhurst Dr.	Florin Rd.to Westmoreland	.2
Bruceville Rd.	Calvine Rd.Ext.to Wyndham Dr.	.8
Wyndham Dr.	Valley Hi Dr.to Bruceville Rd.	.5
Valley Hi Dr.	Franklin Blvd.to Monaghan	.6
Mack Road	Franklin Blvd.to Stockton Blvd.	1.8
Franklin Blvd.	Meadowview Rd.to Valley Hi Dr.	1.2
24th St.Extension	From Laramore Way South	.4
19th St.Extension	From Danvers Way South	.6
Amherst St. Ext.	Janrick Ave. to 19th St.	.4
Havenside Dr.	Riverside Blvd. to Gloria Dr.	1.0
Havenhurst Dr.	Riverside Blvd.to Florin Rd.	.6
S.Land Park Dr.	I-5 to Havenhurst Dr.	.4
Lemon Hill Ave.	Logan St.to Power Inn Rd.	.2
Power Inn Rd.	So.City Limits to Fruitridge Rd.	2.1
Amherst St.-Endres	Florin Rd.to Chorley Park	.3
Riverside Blvd.	Clipper Way to 2nd Ave.	3.7
Howe Ave.	Highway 16 to University Ave.	.8
Garden Highway	Discovery Park Ent.to Northgate	1.5
Fairbanks Ave.	Western Ave.to Norwood Ave.	.6
W.Silver Eagle Rd.	Northgate Blvd.to Western Ave.	.3
Western Ave.	Fairbanks Ave.to Morrison Ave.	.9
Grand Ave.	Norwood Ave.to Altos Ave.	.5

Phase Two Development - Total 35.1

PHASE THREE:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Truxel Road	Garden Highway to San Juan Rd.	1.4
Riverside Blvd.	Pocket Rd. to Pocket Rd.	2.6
Pocket Road	Riverside Blvd. to Alma Vista	<u>.5</u>
	Phase Three Development-Total	4.5

PHASE FOUR:

<u>Street</u>	<u>Location</u>	<u>Mileage</u>
Pocket Road	Riverside Blvd. to Riverside Blvd.	3.5
Havenside Drive	Pocket Rd.to Riverside Blvd.	.5
No Name St.Ext.	Detroit Blvd.to Sacto River Levee	2.1
Meadowview Road-		
Mack Rd.Connector		.9
Elder Creek Rd.	Power Inn Rd.to Florin-Perkins Rd.	.9
21st Ave. Ext.	Power Inn Rd.to Florin-Perkins Rd.	.9
Florin-Perkins Rd.	Elder Creek Rd.to Highway 16	2.3
Highway 16	Notre Dame Dr.to Florin-PerkinsRd.	.5
W.El Camino Ave.	City Limits-West of I-5 to	
	Reiner Way	1.5
W.El Camino Ave.	E.Levee Rd.to Northgate Blvd.	.3
El Camino Ave.	Santiago Ave. to Ethan Way	2.4
San Juan Rd.	W.of El Centro Rd.to Northgate Bl.	3.7
Silver Eagle Rd.	Western Ave.to Norwood Ave.	.6
Norwood Ave.	Carroll Ave.to Main Ave.	1.8
Sully Street	Main Ave.to Claire Ave.	.5
Claire Ave.	Sully St.to Rio Linda Blvd.	.5
	Phase Four Development - Total	22.9

Sacramento City Ordinance No. 3343 — Fourth Series

ORDINANCE NO. 3343 FOURTH SERIES

An Ordinance Amending Section 2.70; Adding Article VIII To Chapter 2 (Commencing with Section 2.123); Amending Sections 2.152, 2.256, and 2.276; Adding Section 34.110; and Amending Sections 49.208 and 56.204 of The Sacramento City Code Relating To The Compensation Payable To Members of the Following City Boards and Commissions: Sacramento Museum and History Commission, Construction Codes Advisory and Appeals Board, Sacramento Redevelopment Commission, Sacramento Housing Commission, Retirement Board of The Sacramento City Employees' Retirement System, Housing Code Advisory and Appeals Board and The Planning Commission of The City of Sacramento, and Relating To The Compensation Payable To Members of The Redevelopment Agency of The City of Sacramento; and Making The Effective Date of Various Sections of This Ordinance Contingent Upon The Concurrence Therein By The Board of Supervisors of The County of Sacramento.

BE IT ENACTED BY THE COUNCIL OF THE CITY OF SACRAMENTO:

SECTION 1.

Section 2.70 of Article IV, Division 1, of the Sacramento City Code is hereby amended to read as follows:

Sec. 2.70. Meetings and Compensation.

The museum and history commission shall hold regular meetings at least once a month at a time and place selected by majority vote of the entire commission. Each member of the commission shall receive as compensation the sum of twenty dollars (\$20) for each commission meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 2.

Article VIII is hereby added to Chapter 2 of the Sacramento City Code to read as follows:

ARTICLE VIII. Redevelopment Agency

Sec. 2.128. Compensation of members of agency.

Each member of the Redevelopment Agency of the City of Sacramento shall receive as compensation the sum of twenty dollars (\$20) for each commission meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 3.

Section 2.152 of Article X of Chapter 2 of the Sacramento City Code is hereby amended to read as follows:

Sec. 2.152. Appointment, term of office; compensation of members.

The construction codes board shall be appointed by the mayor with the approval of the city council. Members shall be appointed for three-year terms except that individual members of the first board shall be appointed for one-, two-, and three-year terms respectively, as designated by the mayor and approved by the council. Thereafter appointments shall be for three-year terms as set forth in this article.

Each member of the board shall receive as compensation the sum of twenty dollars (\$20) for each board meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 4.

Section 2.256 of Article XIII of Chapter 2 of the Sacramento City Code is hereby amended to read as follows:

Sec. 2.256. Compensation.

Each member of the redevelopment commission shall receive as compensation the sum of twenty dollars (\$20) for each commission meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 5.

Section 2.276 of Article XIV of Chapter 2 of the Sacramento City Code is hereby amended to read as follows:

Sec. 2.276. Compensation.

Each member of the housing commission shall receive as compensation the sum of twenty dollars (\$20) for each commission meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month, and further provided that the term "compensation" as used herein shall mean compensation received by said member from both the City of Sacramento and the County of Sacramento for services as a member of the commission. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 6.

Section 34.110 is hereby added to Article I of Chapter 34 of the Sacramento City Code:

Sec. 34.110. Compensation of the city resident member of the retirement board.

The city resident member of the retirement board shall receive as compensation the sum of twenty (\$20) for each board meeting attended; provided that the total compensation of such member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 7.

Section 49.208 of Article II of Chapter 49 of the Sacramento City Code is hereby amended to read as follows:

Sec. 49.208. Compensation.

Each member of the housing code advisory and appeals board shall receive as compensation the sum of twenty dollars (\$20) for each board meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence ex-

penses incurred in the discharge of his duties.

SECTION 8.

Section 56.204 of Article II of Chapter 56 of the Sacramento City Code is hereby amended to read as follows:

Sec. 56.204. Compensation of members.

Each member of the planning commission shall receive as compensation the sum of twenty dollars (\$20) for each commission meeting attended; provided that the total compensation of each member shall not exceed one hundred dollars (\$100) in any one month. In addition, each such member shall receive necessary travelling and subsistence expenses incurred in the discharge of his duties.

SECTION 9.

The increases in compensation provided by Section 1 and Section 5 of this ordinance to members of the Sacramento Museum and History Commission and members of the Housing Commission shall not be effective until said increases in compensation have been concurred in and approved by the Board of Supervisors of the County of Sacramento. Until such increases are approved and concurred in by the Board of Supervisors, each member of each of said commissions shall continue to be entitled to receive such compensation and remuneration as he was lawfully entitled to receive on the effective date of this ordinance.

SECTION 10.

This ordinance shall be published once in the official newspaper of the City of Sacramento within ten days after passage.

PASSED: December 27, 1973

EFFECTIVE: January 26, 1974

RICHARD H. MARRIOTT
Mayor

ATTEST:
JACI K. DE FORD
City Clerk

SCC. NO. 151

AN ORDINANCE AMENDING THE PROVISIONS OF
THE SACRAMENTO COUNTY CODE, RELATING TO
THE ESTABLISHMENT OF A CITY-COUNTY
BIKEWAY TASK FORCE

The Board of Supervisors of the County of Sacramento, State of California, do ordain as follows:

SECTION 1. Chapter 2.92 is added to the Sacramento County Code to read:

CHAPTER 2.92

CITY-COUNTY BIKEWAY TASK FORCE

Sections:

- 2.92.010 Established.
- 2.92.020 Definitions.
- 2.92.030 Appointment and removal of task force members.
- 2.92.040 Terms of office - First appointments.
- 2.92.050 Chairman, Secretary.
- 2.92.060 Meetings.
- 2.92.070 Vacancies.
- 2.92.080 Duties.
- 2.92.090 Joint participation.

2.92.010. ESTABLISHED. The Sacramento City-County Bikeway Task Force is established.

2.92.021. DEFINITIONS. As used in this chapter, the following words have the following meaning:

- (a) "Board" shall mean the Board of Supervisors of Sacramento County.
- (b) "City" shall mean the City of Sacramento.
- (c) "Task Force" shall mean the Sacramento City-County Bikeway Task Force.
- (d) "Council" shall mean the City Council of the City of Sacramento.

- (e) "County" shall mean the County of Sacramento.
- (f) "Mayor" shall mean the Mayor of the City of Sacramento.
- (g) "Member" shall mean a person appointed as a member of the task force.

2.92.030. APPOINTMENT AND REMOVAL OF TASK FORCE MEMBERS. The task force shall consist of thirteen members who shall be appointed as follows:

- (a) Six members to be appointed by the Mayor with approval of the Council. Any members so appointed may be removed by the Mayor with the approval of the Council.
- (b) Six members to be appointed by the Board, which may remove any member appointed by it at any time.
- (c) One member appointed jointly by the Board and by the Mayor, with approval of the Council. Such member may be removed by the joint action of the Board and Mayor, with approval of the Council, in the same manner as appointment.

2.92.040. TERM OF OFFICE. Each member shall serve until such time as the task force shall complete the duties assigned in Section 2.92.080, unless removed as provided in Section 2.92.030. At such time as the task force shall complete its duties, the task force shall be discharged.

2.92.050. CHAIRMAN, SECRETARY. Within fifteen days after the appointment of the members of the task force, they shall meet and organize by electing from their members a chairman and a secretary who shall hold office until the task force is discharged.

2.92.060. MEETINGS. The task force shall hold regular meetings at least once a month, at a time and place selected by majority vote of the entire membership.

2.92.070. VACANCIES.

(a) The Mayor, with approval of the Council, shall fill any vacancy occurring among the members which it appoints, and the Board shall fill any vacancy occurring among the members which it appoints

and the mayor, with approval of the Council, and the Board shall jointly fill any vacancy occurring in the position of the member appointed jointly.

(b) The position of any member who fails to attend, in succession, three or more regular meetings, without the prior approval of the majority of the members of the task force, shall automatically become vacant.

2.92.080. DUTIES. The duties of the Task Force shall be as follows:

- (a) To develop a master plan for bikeways within the boundaries of the city and county;
- (b) To act as a technical and general resource group to advise and assist city and county staff and to monitor the staff's progress;
- (c) To hold neighborhood hearings throughout the city and county for the purpose of ascertaining public opinion and evaluating recommendations received from the public with regard to the bikeway master plan and to establish priorities for bikeway construction;
- (d) To help develop a county-wide bicycle safety and security program;
- (e) To insure continuity of planned bikeways through contiguous jurisdiction;
- (f) To perform such other services relative to the establishment of city and county bikeways as the council or board may direct.

2.92.090. JOINT PARTICIPATION. The council and board shall jointly share in the cost of maintaining the task force and shall provide sufficient funds to finance the activities of the task force.

SECTION 2. This ordinance shall be in full force and effect at the expiration of thirty (30) days from and after its passage and before the expiration of fifteen (15) days from and after its passage, it shall be published at least once in Sacramento Press-Journal a newspaper of general circulation, printed and published in the County of Sacramento, together with the names of the members of the Board of Supervisors of the County of Sacramento, voting for and against the same.

On a motion by Supervisor Gualco, seconded by Supervisor Melarkey, the foregoing ordinance was passed and adopted by the BOARD OF SUPERVISORS of the County of Sacramento, State of California, this 5th day of December, 1973, by the following vote, to wit:

AYES: Supervisors, Gualco, Melarkey, Smoley, Kloss

NOES: Supervisors, None

ABSENT: Supervisors, Sheedy

E. Henry Kloss

Vice-Chairman of the Board of Supervisors
of Sacramento County, California

Sacramento Press-Journal
Run 1 time, 12/17/73
Send one affidavit & two bills
with stone proofs attached, plus
100 stone proofs.

(SEAL)

ATTEST:

Jack A. Angel
Clerk of the
Board of Supervisors

FILED

Dec. 5, 1973

Jack A. Angel

In accordance with Section 20000 of the Government
Code of the State of California, the Board of
Supervisors of the County of Sacramento, California,
Board of Supervisors, County of Sacramento, California

DEC 5 1973

George Dickson
Deputy Clerk, Board of Supervisors

APPENDIX D
PROPOSED PROJECTS
for the

"State Beach, Park, Recreational and Historical
Facilities Bond Act of 1974"

COUNTY-WIDE PROJECTS: 25% of County Allocation

1. Development of a City-County Historical Museum: \$250,000
2. Development of off-street multi-purpose trail projects to be identified in the forthcoming Bikeways Master Plan, currently in preparation by the City-County Bikeways Task Force: \$300,000
3. Development of a recreational trail including a bikeway, extending northward from the American River Parkway, along the Natomas East Main Drain, to the Carl Hansen Park site at the confluence of the Drain and Dry Creek: \$146,120

LOCAL JURISDICTION PROJECTS: 75% of County Allocation

1. Arden Manor Recreation and Park District (\$19,719)
Tennis Courts (Lighted): Projected for construction at Deterding or Crabtree Park: \$19,719
2. Arden Park Recreation and Park District (\$16,762)
Community Center Building Renovation and Expansion: Improvements to existing community center at La Sierra Park: \$16,762
3. Carmichael Recreation and Park District (\$108,297)
Del Campo Community Park: Projected construction of community type facilities at park site to include social, cultural and community recreation center: \$108,297
4. Cordova Recreation and Park District (\$187,497)
 - a. Larchmont Community Park: Phase I of park development to include site improvements, turf area, and initial facility construction to include two tennis courts, picnic and play areas: \$63,085
 - b. Community Park II: Development of picnic and play areas in this community park: \$17,205

- c. Lincoln Village Park: Construction of a community center building: \$84,267
- d. Rosemont Community Park: Improvements to land such as grading, irrigation system, turf and some facility construction: \$22,940
- 5. Del Paso Recreation and Park District (\$36,913)
Arcade Creek Neighborhood Park: Site improvements and facility development: \$36,913
- 6. Elk Grove Recreation and Park District (\$34,723)
 - a. Mendoza Park: Development of neighborhood park site: \$21,223
 - b. Terra Linda Park: Development of sprinkler system and landscaping for neighborhood park site: \$13,500
- 7. Fair Oaks Recreation and Park District (\$77,895)
Fair Oaks Park Development: Recreation center building, maintenance shop, children's play area; two tennis courts; indoor small-bore fifle range: \$77,895
- 8. Fulton-El Camino Recreation and Park District (\$76,434)
Howe Community Park: Completion of park landscaping: \$76,434
- 9. North Highlands Recreation and Park District (\$109,679)
 - a. Wendell Brock Park: Development of sports complex: baseball, softball, football, soccer, open play field; and related facilities: \$44,000
 - b. Community Park: Community center building; outdoor theater, lake and nature area; tennis courts, outdoor theater, arboretum, picnic areas, and play equipment area: \$65,679
- 10. Southgate Recreation and Park District (\$95,602)
Bikeways: Development of bike and hiking trails: \$95,602
- 11. Sunrise Recreation and Park District (\$235,904)
 - a. Robbers' Roost Historical Park: Partial land acquisition: \$50,000
 - b. Trailway and Parkway System: \$5,904

- c. Tempo Community Park: Phase I development to include comfort station, picnic areas, tennis courts, handball courts, ball fields, community building, trails, tot lot areas: \$135,000
 - d. Spruce Avenue Community Park: Provision of comfort station and parking: \$45,000
12. County Service Area No. 3 (Rio Linda) \$34,283)
- Rio Linda Community Center: Development of community center building: \$34,283
13. County Service Area No. 4A (Fruitridge) (\$55,906)
- Wire Park: Land acquisition: \$55,906
14. County Service Area No. 7 (Mission Oaks) (\$138,223)
- a. Mission and North Park Site: Phase I development to include site improvements, central parking lot, roadway, turf and irrigation, center pathway with bridge: \$106,081
 - b. C.V.P. Power Line Access: Development of irrigation, turf, restrooms and bike trail: \$32,142
15. City of Folsom (\$25,273)
- "Mini-Park" at Lew Howard Memorial Park: Renovate building, parking, barbeque pits and table sets: \$25,273
16. City of Galt (\$11,865)
- Galt Community Park: Site improvements; development of bike trail; pedestrian ways; bridle path, softball field; picnic areas; 2+ acre lake; open areas and playground: \$11,865
17. City of Isleton (\$10,000)
- Acquisition of Isleton Municipal Parks and Recreation Areas: \$10,000
18. City of Sacramento (\$813,381)
- a. Sunland Vista Park Site: Development of neighborhood park facility: \$77,250
 - b. Bigler Park Site: Development of facilities and landscaping at this community park site: \$144,200

- c. Valley Hi Community Park: Development of 4 acres of a 17.6 acre community park site: \$80,000
- d. Argonaut School Park: Development of 2 acres for neighborhood recreation purposes: \$51,500
- e. West Pocket Park Site: Development of 3.4 acres of a neighborhood park site: \$105,060
- f. Southgate Community Park Site: Acquisition and development, including landscaping, play fields, apparatus areas and hard-surfaced games areas: \$80,000
- g. Northgate/Gardenland Community Park Site: Acquisition and development, including play fields, apparatus areas, picnic areas, hard-surfaced game areas: \$80,000
- h. East Broadway Community Park Site: Acquisition and typical neighborhood park development: \$80,000
- i. Del Paso Heights Community Center: Development of a multi-purpose recreation center: \$65,371
- j. Washington Community Center: Development of a multi-purpose recreation center: \$50,000

APPENDIX E
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